SERVICE MANUAL Sc-11

marantz®

model Sc-11

Control Stereo Console

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound. Only **original MARANTZ parts** can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS:
Parts can be ordered either by mail or by telex. In both cases, MARANTZ part number has to be specified. If you order by mail, fulfil MARANTZ order forms.

MARANTZ S.A.
EUROPEAN PARTS DEPARTMENT
2, Avenue Léopold III
B-7120 PERONNES-lez-BINCHE
BELGIUM
TWX: 57589 SEPLT B

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

PARTS ORDERING:
Parts may be ordered from the following addresses:

EUROPE

MARANTZ S.A.
European Parts Department
2, Avenue Léopold III
B-7120 Péronnes-lez-Binche
Belgium
Telex: 57589

MARANTZ DENMARK
Bregnerødvej 132b
3460 Birkerød
Denmark
Telex: 39137

MARANTZ BELGIUM
45 Rue Auguste Van Zande
1080 Brussels
Belgium

MARANTZ NEDERLAND B.V.
Wagenmakersweg 3
3449 HV Woerden
Netherlands

MARANTZ S.A.
326 Avenue Louise Bte 32
1050 Bruxelles
Belgium
Telex: 26602

MARANTZ FRANCE
4 Rue Bernard Palissy
92600 Asnières
France
Telex: 611651

MARANTZ SVENSKA A.B.
Svartviksvägen 56
Träneberg Bromma
Sweden
Telex: 13449

MARANTZ ITALIANA S.p.A.
Via Monte Napoleone, 10
20121 Milano
Italia

MARANTZ GERMANY G.M.B.H.
Max-Planckstrasse 22
6072 Dreieich 1
Germany
Telex: 4185316

MARANTZ AUDIO U.K. LTD.
Unit 15/16
Saxon Way Industrial Estate
Moor Lane
Harmondsworth UB7 OLW
Great Britain
Telex: 935196

MARANTZ AUSTRIA Ge.M.B.H.
25 Franz Lisztgasse
2380 Perchtoldsdorf
Austria
Telex: 113583

AUSTRALIA

MARANTZ AUSTRALIA PTY., LTD.
19 Chard Road
Brookvale, NSW 2100
Australia
Telex: 24121

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

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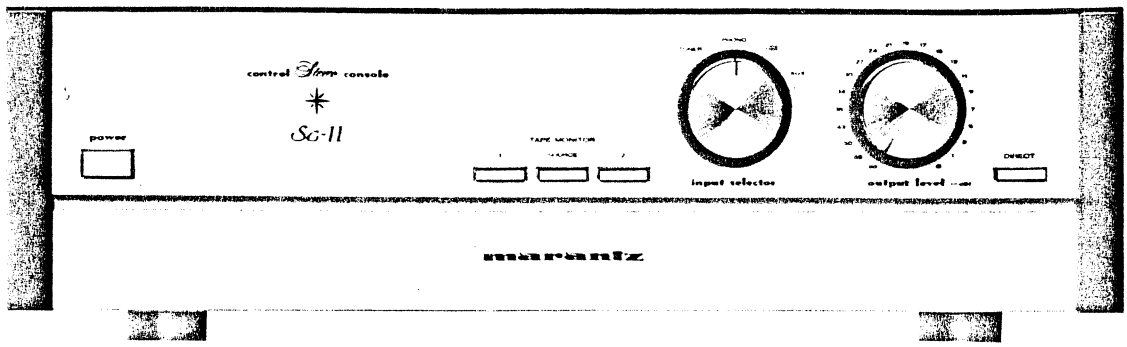
TABLE OF CONTENTS

SECTION		PAGE
INTRODUCTION		1
1.	FEATURES	1
2.	P.W. BOARDS	2
3.	TEST EQUIPMENT REQUIRED FOR SERVICING	2
4.	VOLTAGE CONVERSION	3
5.	BLOCK DIAGRAM	4
6.	SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS	5
6.1	Phono Amp. Assembly (P400) Schematic Diagram and Component Locations	5
6.2	AC Outlet Assembly (PL00) Schematic Diagram and Component Locations	5
6.3	12V AVR. Assembly (P800) Schematic Diagram and Component Locations	7
6.4	Direct Switch Assembly (PT00) Schematic Diagram and Component Locations	8
6.5	MC Head Amp. Assembly (PD00) Schematic Diagram and Component Locations	8
6.6	Selector Switch Assembly (PU00) Schematic Diagram and Component Locations	8
6.7	Tape Monitor Switch Assembly (PS00) Schematic Diagram and Component Locations	11
6.8	Headphone Assembly (PW50) Schematic Diagram and Component Locations	11
6.9	RCA Jack Assembly (PV00) Schematic Diagram and Component Locations	12
6.10	Buffer Amp. Assembly (PJ00) Schematic Diagram and Component Locations	12
7.	EXPLODED VIEW AND PARTS LIST	14
8.	ELECTRICAL PARTS LIST	19
9.	TECHNICAL SPECIFICATIONS	29
10.	SCHEMATIC DIAGRAM	30

MARANTZ MODEL Sc-11 CONTROL STEREO CONSOLE



INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model Sc-11 Control Stereo Console.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

1. FEATURES

NF-CR Type Phono Equalizer

The NF-CR type phono equalizer uses an NF circuit for the bass turnover and a CR network for the high end roll-off. This high performance configuration achieves both outstanding transients as well as excellent overload characteristics over the entire frequency band.

Jump Mechanism (Direct Switch) Simplifies The Signal Path

The Sc-11 features a Jump Mechanism that simplifies the signal path and thus avoids the decrease in sound clarity caused by an excessively complex signal path.
When the Jump Mechanism is turned on by pressing the Direct switch, the input source will be sent through the input selector and the volume control to a low output impedance output amplifier stage, and from there directly to the main amplifier stage. All other circuits will be bypassed.
This feature prevents sound coloration and deterioration of the S/N ratio.

Full Scale MC Head Amplifier

To improve the S/N ratio when MC cartridges are being used, the Sc-11's MC head amplifier features six ultra low noise transistors per channel in a parallel push-pull configuration. The MC head amplifier also has its own convenient set of input terminals.

High Precision Tone Control Circuit

The tone control circuit of the output amplifier uses a click stop type switch to select the equalization devices for each position. The output amplifier uses the same push-pull unit amplifier configuration as does the phono equalizer amplifier. The low impedance NFB circuit of the output amplifier prevents the increased distortion and poor S/N ratio commonly associated with equalization devices, and thus achieves high quality sound and an excellent S/N ratio.

Full Stage Push-Pull Configuration

To achieve low noise and distortion with low NFB, the two stage phono equalizer amplifier and flat amplifier have been completely configured from the input to the output stage as full stage push-pull circuit DC unit amplifiers.
The primary stage features ultra low noise high gm FETs in a push-pull configuration, and the cascode bootstrap circuit prevents deteriorations in the performance caused by changes in the impedance.
The output stage features a two stage SEPP circuit and sufficient idling current to assure full class A operation, even at high power output levels.

2. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model Sc-11 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. **Phono Amp. . . . . mounted on P.W. Board P400**
2. **12V AVR. . . . . mounted on P.W. Board P800**
3. **MC Head Amp. . . . . mounted on P.W. Board PD00**
4. **Buffer Amp. . . . . mounted on P.W. Board PJ00**
5. **AC Outlet . . . . . mounted on P.W. Board PL00**
6. **Tape Monitor Switch . . mounted on P.W. Board PS00**
7. **Direct Switch . . . . . mounted on P.W. Board PT00**
8. **Selector Switch . . . . . mounted on P.W. Board PU00**
9. **RCA Jack . . . . . mounted on P.W. Board PV00**
10. **Head Phone . . . . . mounted on P.W. Board PW50**

3. TEST EQUIPMENT REQUIRED FOR SERVICING

Item	Use
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
AC VTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
Circuit Tester	Trouble shooting
DC VTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to amplifier
Line Voltmeter	Monitors potential of primary power to amplifier
Variable Autotransformer (0 ~ 140V AC, 10A)	Adjust level of primery power to amplifier
Shorting Plug	Shorts amplifier input to eliminate noise pickup

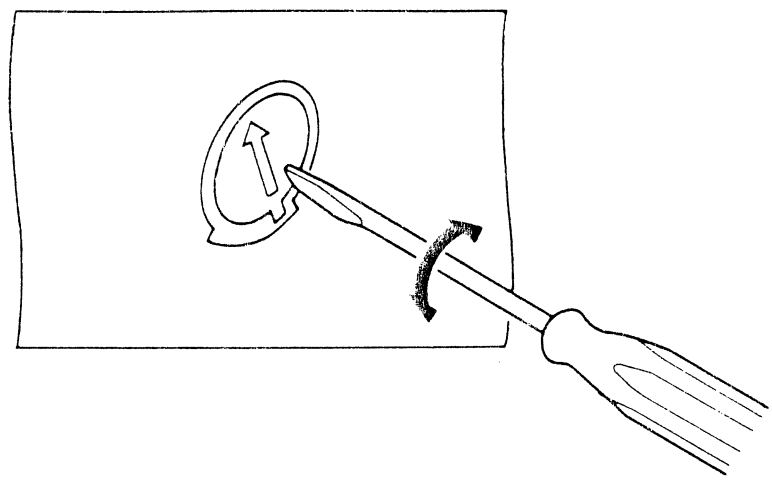
4. VOLTAGE CONVERSION

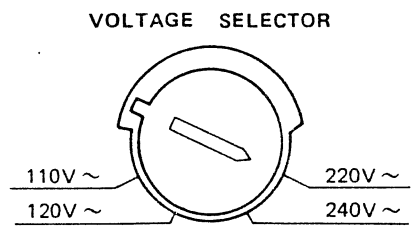
- **EUROPEAN MODEL ONLY**

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

CAUTION
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

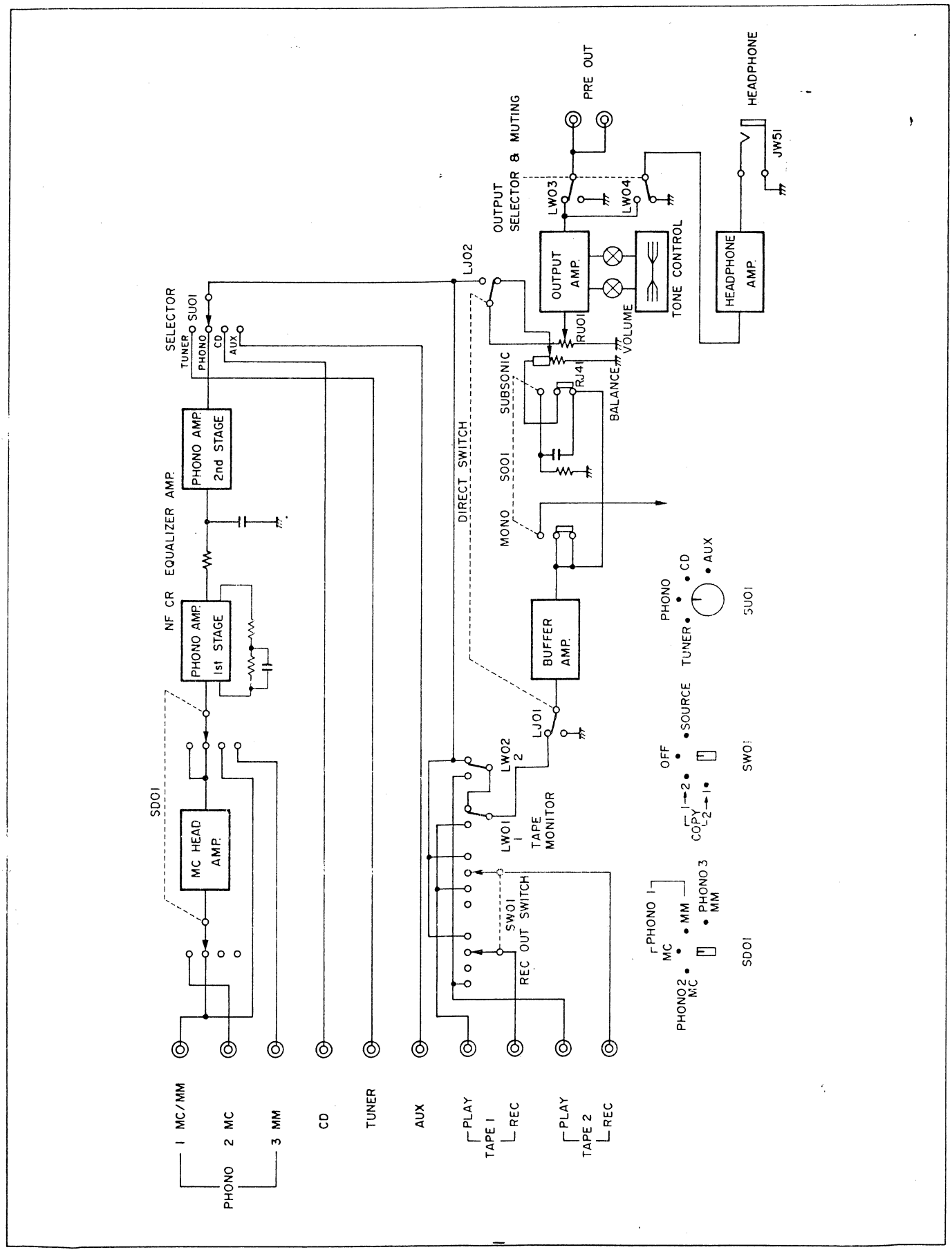
Voltage Conversion Chart





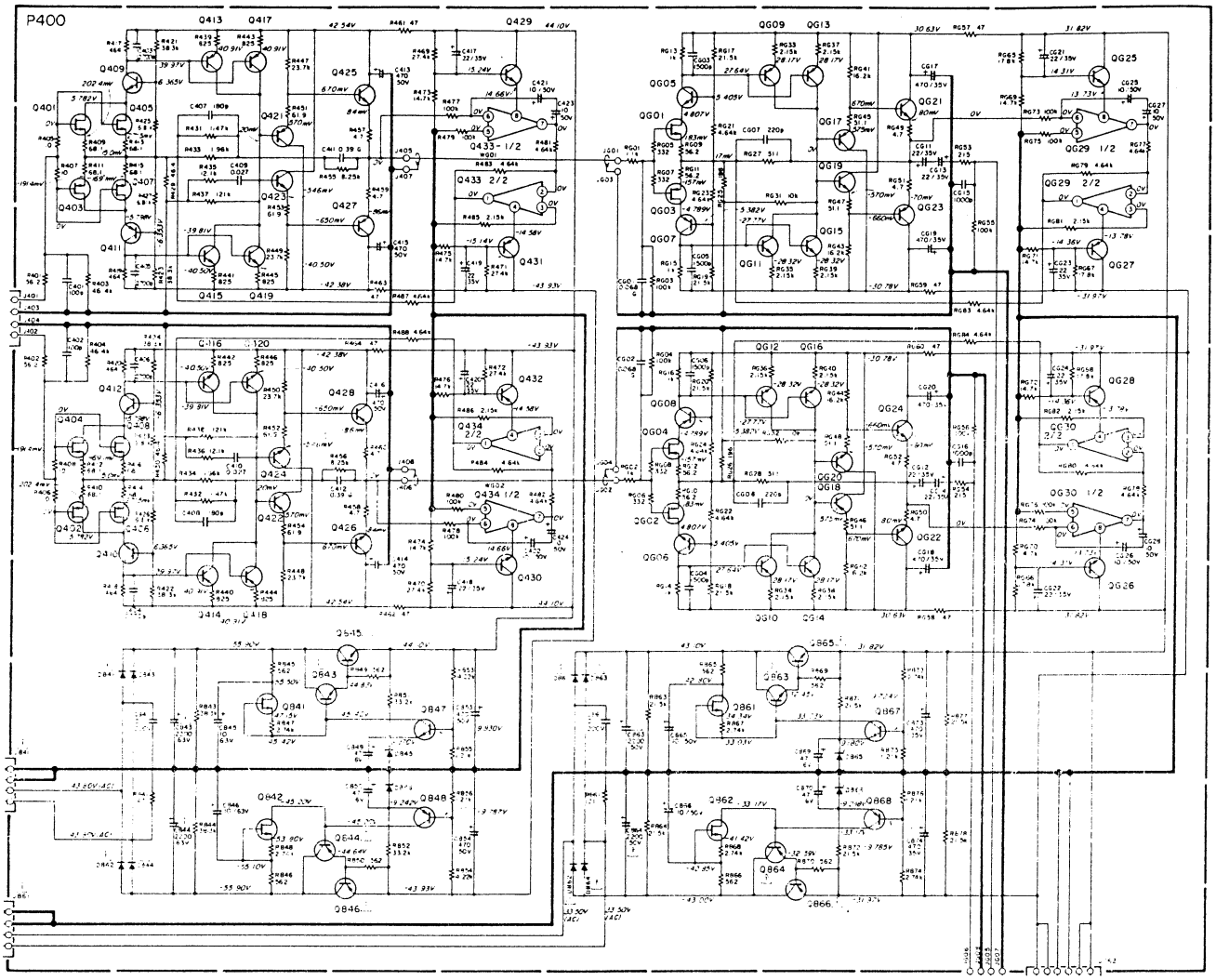
Note on safety: Symbol ⚠ Fire or electrical shock hazard. Only orignal parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

5. BLOCK DIAGRAM

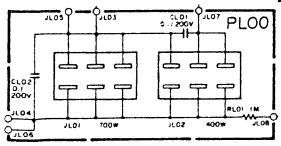


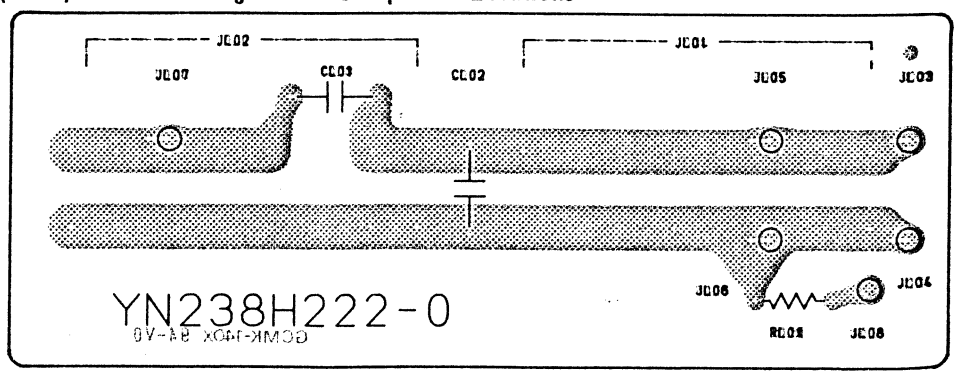
– 6. SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS

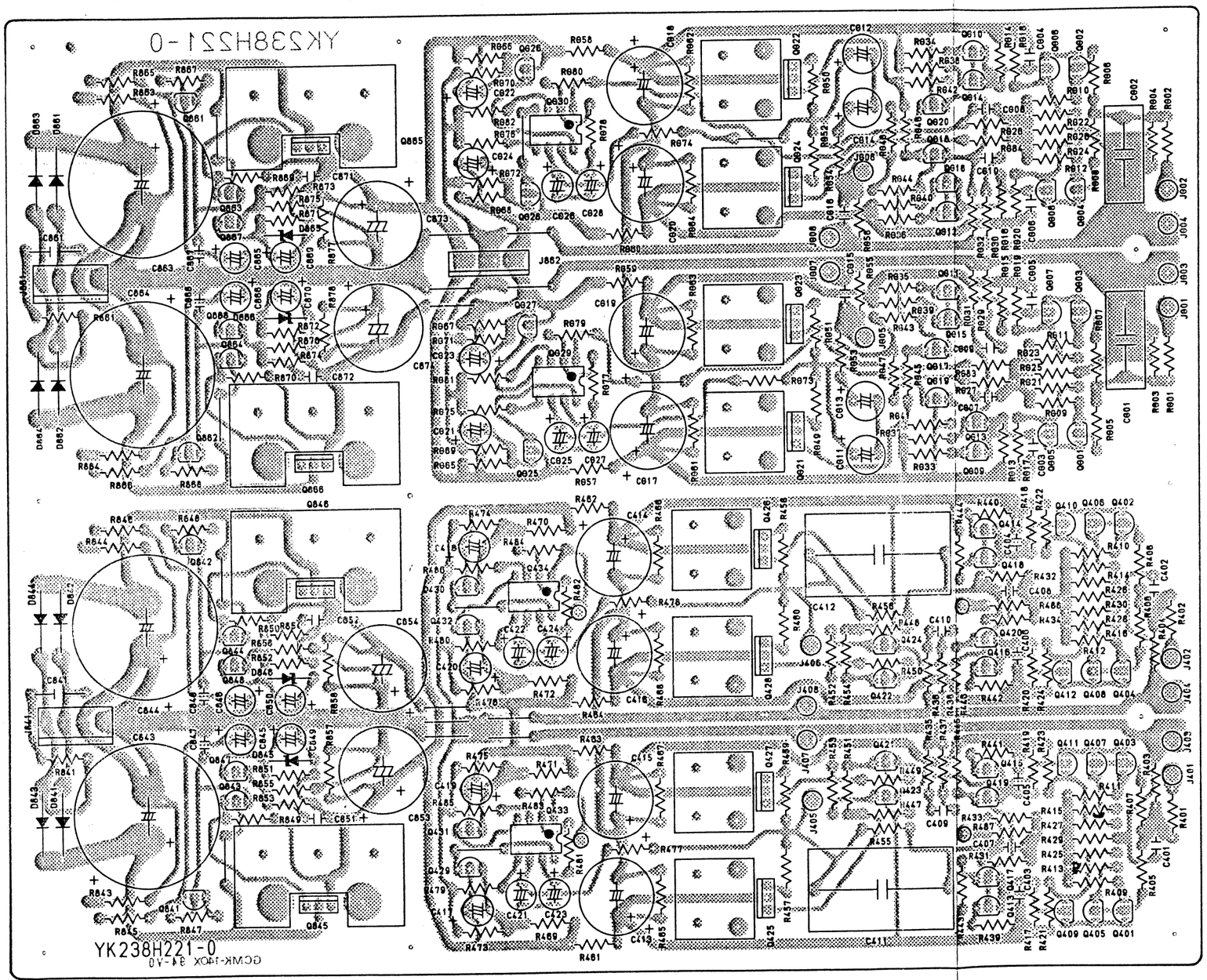
6.1 Phono Amp. Assembly (P400) Schematic Diagram and Component Locations



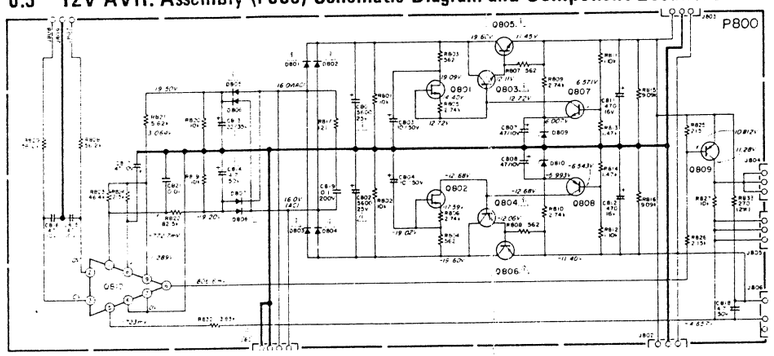
6.2 AC Outlet Assembly (PL00) Schematic Diagram and Component Locations

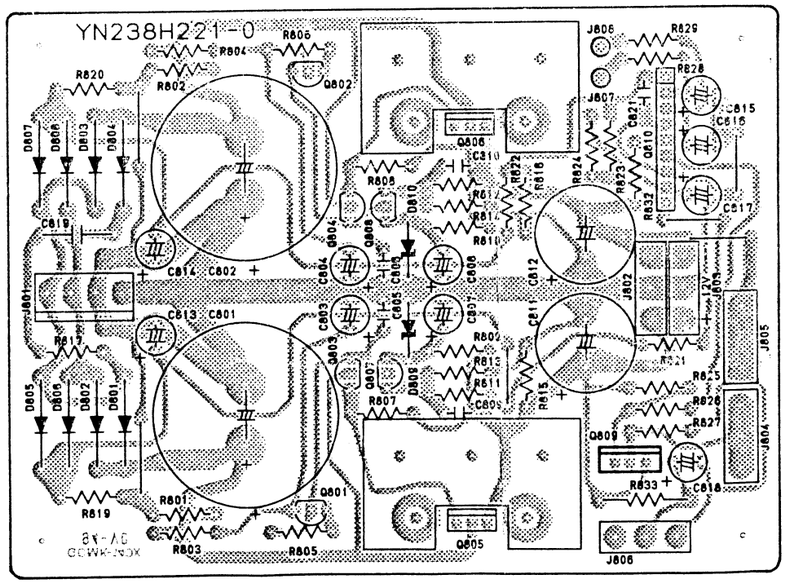




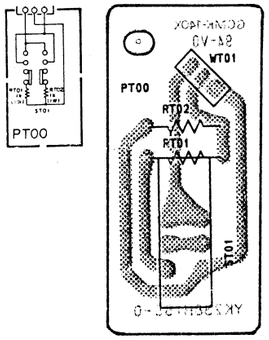


6.3 12V AVR. Assembly (P800) Schematic Diagram and Component Locations

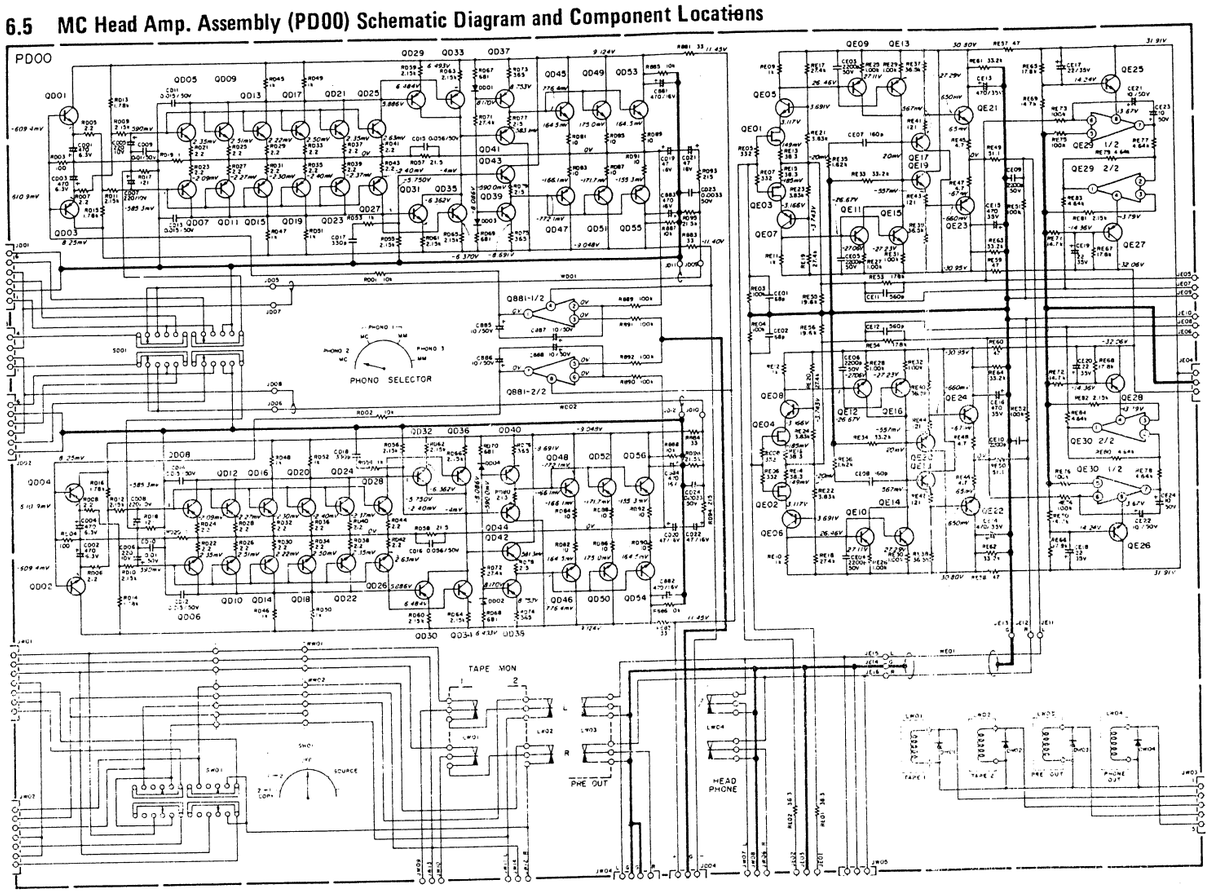




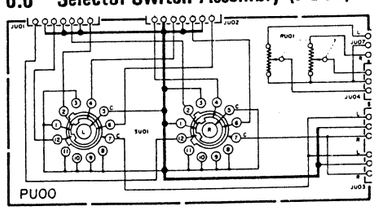
6.4 Direct Switch Assembly (PT00) Schematic Diagram and Component Locations

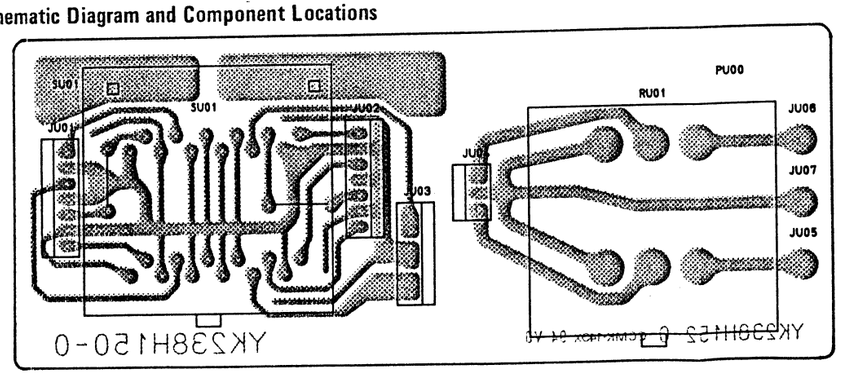


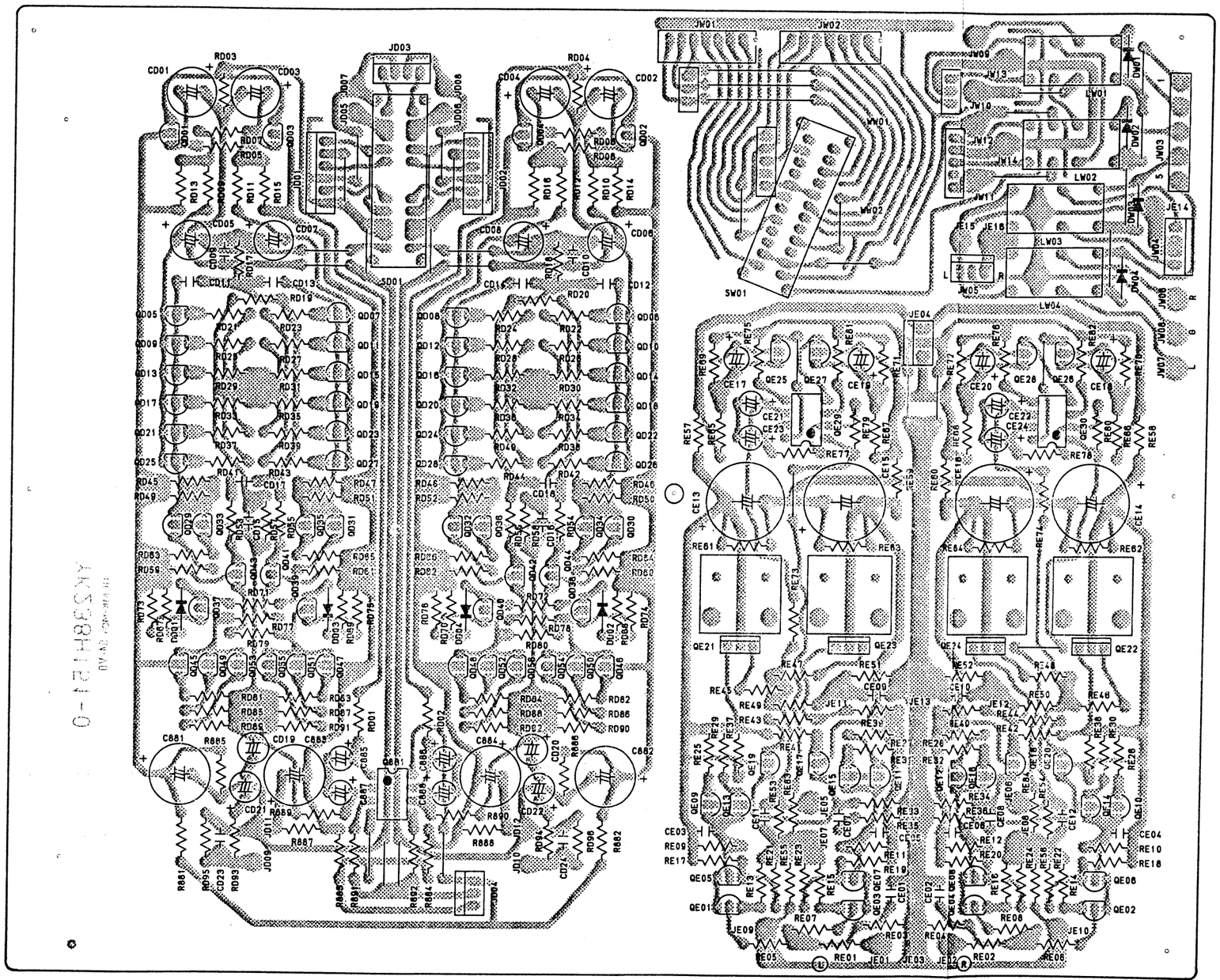
6.5 MC Head Amp. Assembly (PD00) Schematic Diagram and Component Locations



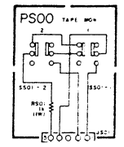
6.6 Selector Switch Assembly (PU00) Schematic Diagram and Component Locations

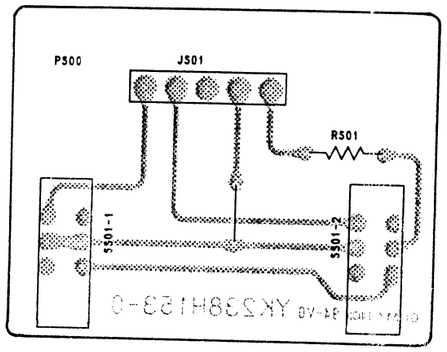




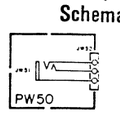


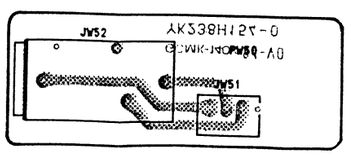
6.7 Tape Monitor Switch Assembly (PS00) Schematic Diagram and Component Locations



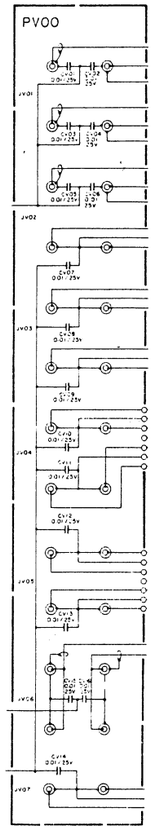


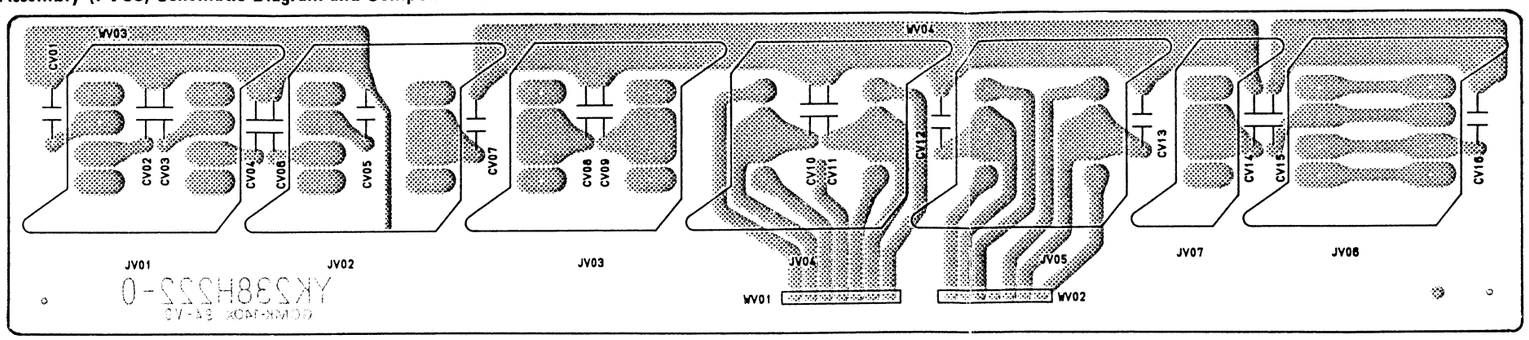
6.8 Headphone Assembly (PW50) Schematic Diagram and Component Locations



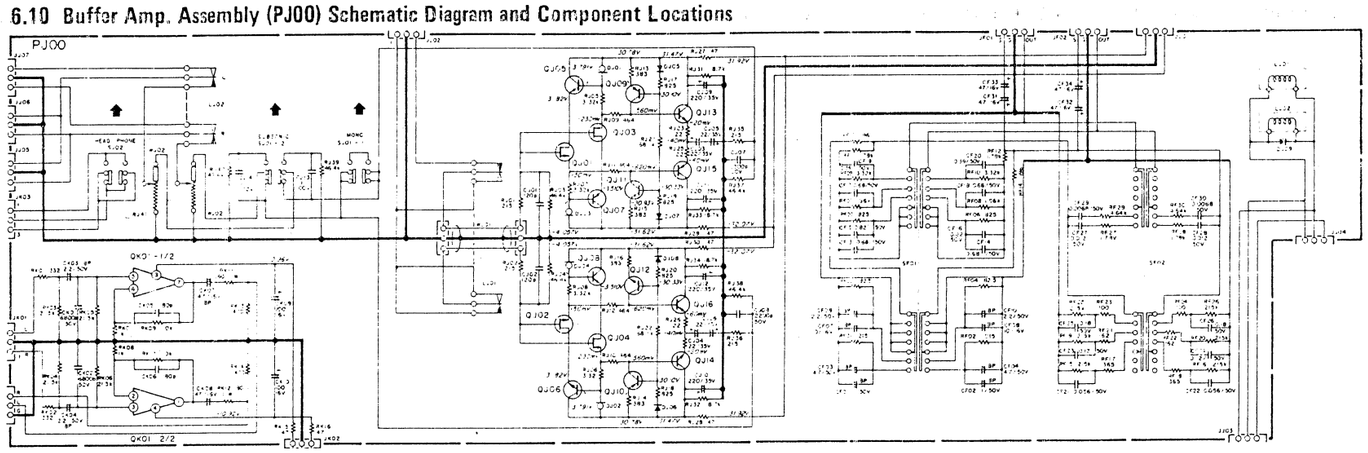


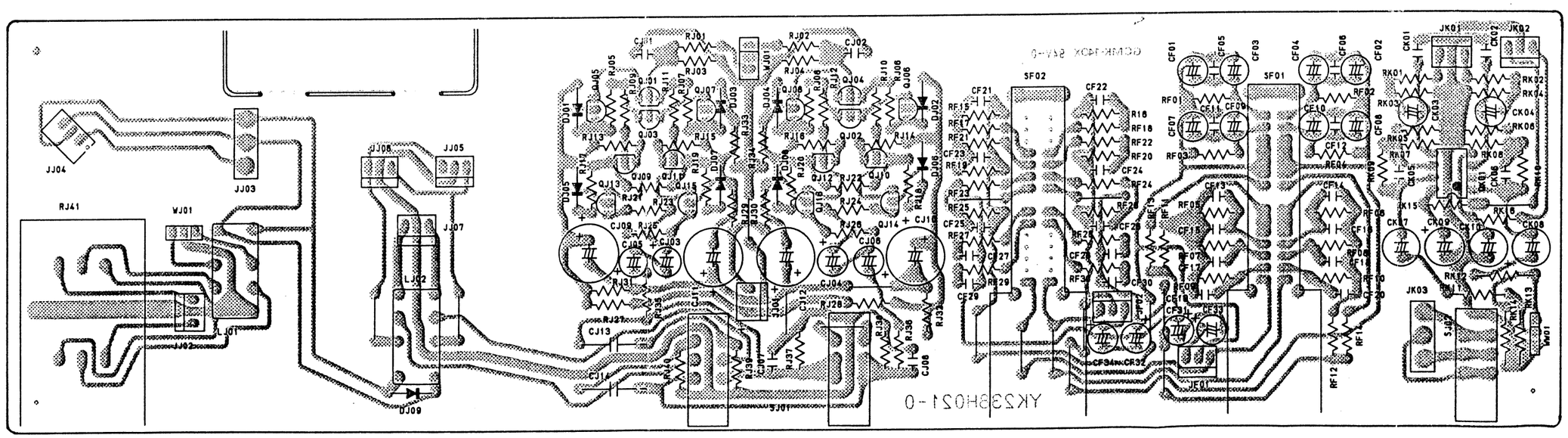
6.9 RCA Jack Assembly (PV00) Schematic Diagram and Component Locations





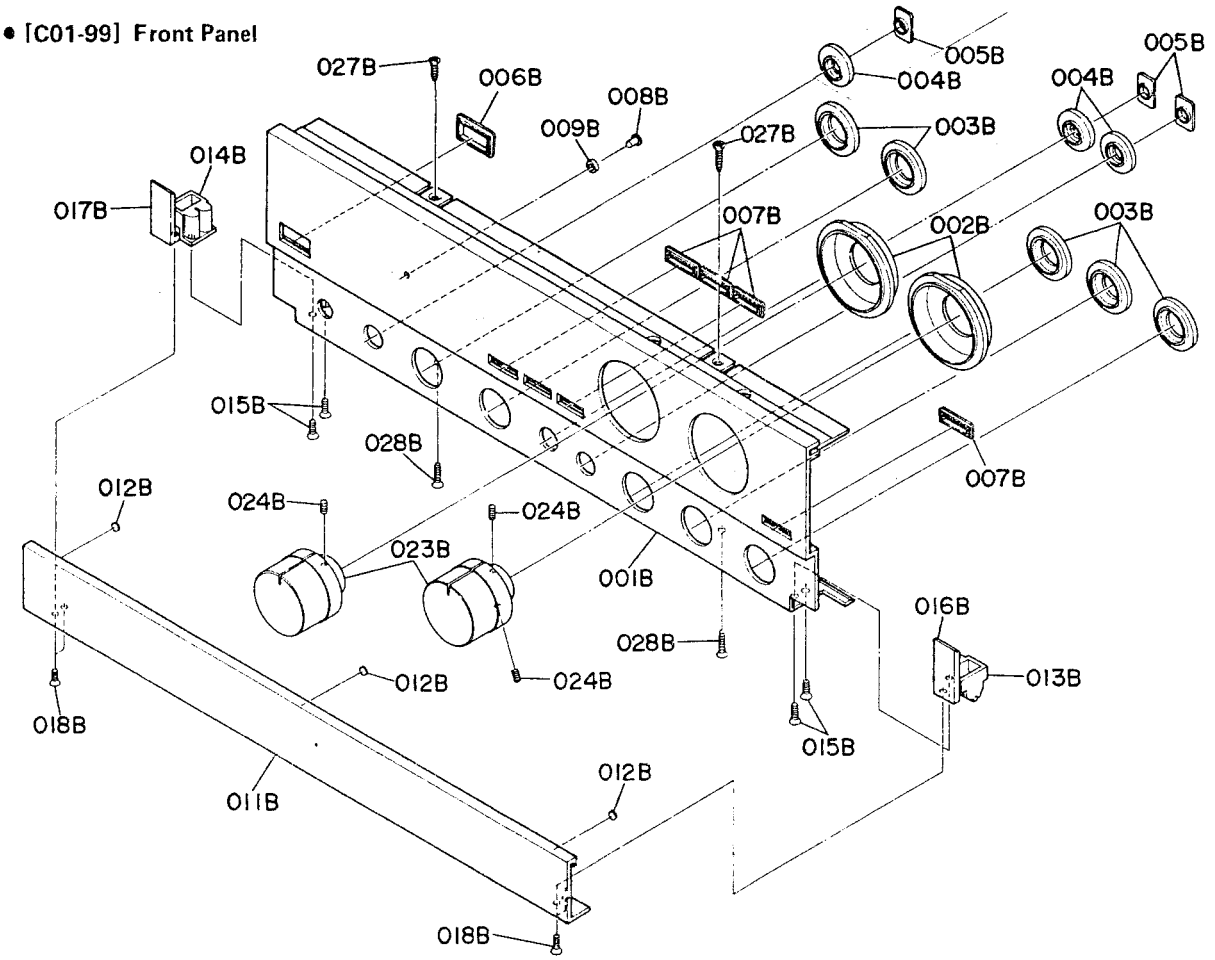
6.10 Buffer Amp. Assembly (PJ00) Schematic Diagram and Component Locations





7. EXPLODED VIEW AND PARTS LIST

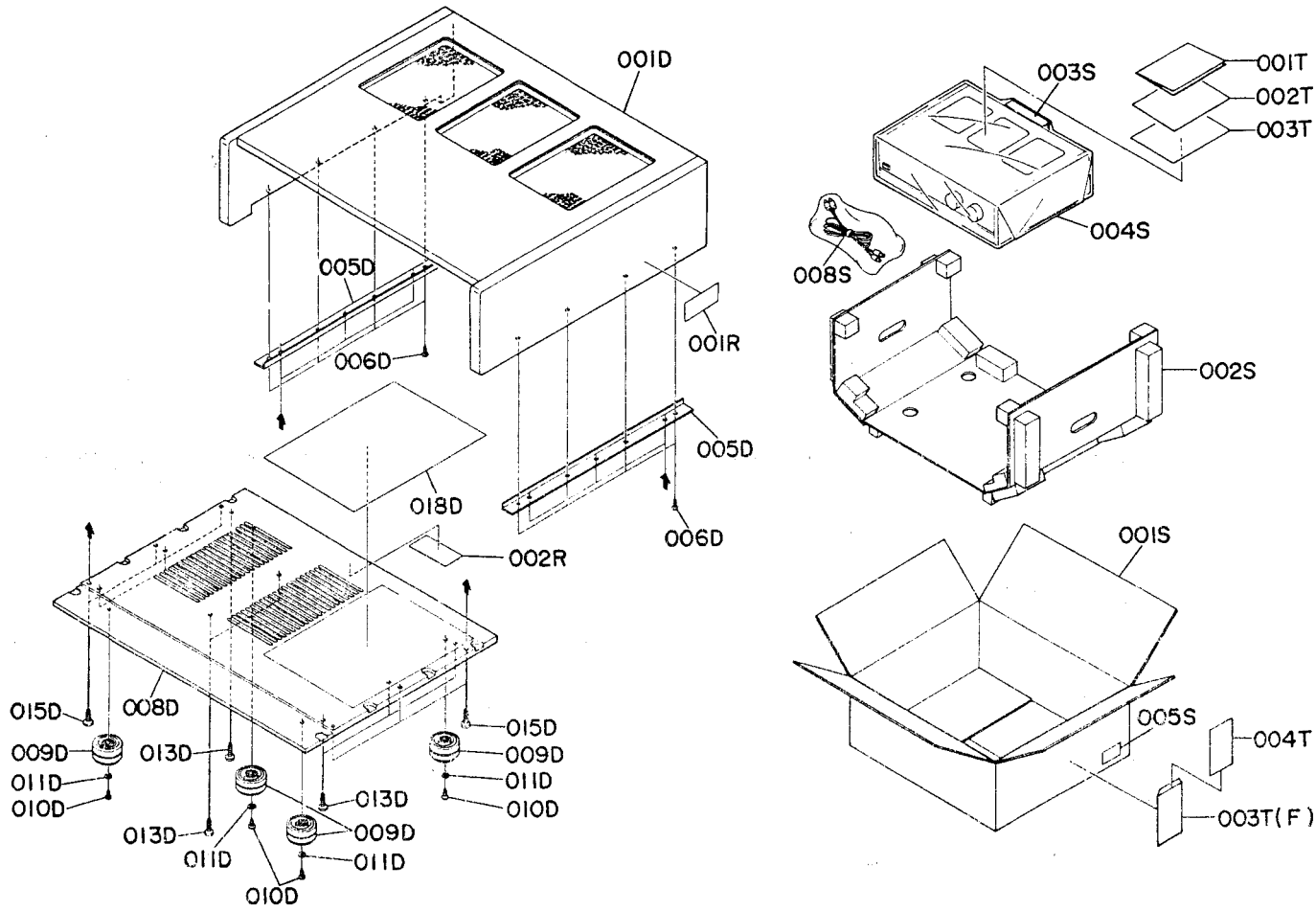
• [C01-99] Front Panel



REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
A	1	1	238H248400	Front Panel Assembly
001B	1	1	238H248010	Front Panel
002B	2	2	238H353010	Ring, Volume/Selector
003B	5	5	238H353020	Ring, Tone/Balance/Rec Out /Phono Selector
004B	3	3	238H353030	Ring, Pre Out/Mono/Subsonic
005B	3	3	203H259010	Bushing, Pre Out/Mono/Subsonic
006B	1	1	239H259010	Bushing, Power Switch
007B	4	4	239H259020	Bushing, Tape Monitor/Direct
008B	1	1	238H355010	Lens, Power Indicator
009B	1	1	2145066010	Rubber Ring, Lens
011B	1	1	238H162010	Door, Panel
012B	3	3	238H056010	Buffer, Door Panel
013B	1	1	238H153010	Hinge (R)
014B	1	1	238H153020	Hinge (L)
015B	4	4	51500308M0	F.H. Tapptite Screw F3 x 8
016B	1	1	238H153030	Hinge (R)
017B	1	1	238H153040	Hinge (L)
018B	4	4	51502606M0	F.H. Tapptite Screw F2.6 x 6

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
023B	2	2	238H154010	Knob, Selector/Volume
024B	4	4	51690306Q9	Socket Screw, HP M3 x 6
027B	2	2	51500308M0	F.H. Tapped Screw F3 x 8
028B	2	2	51500308M0	F.H. Tapped Screw F3 x 8

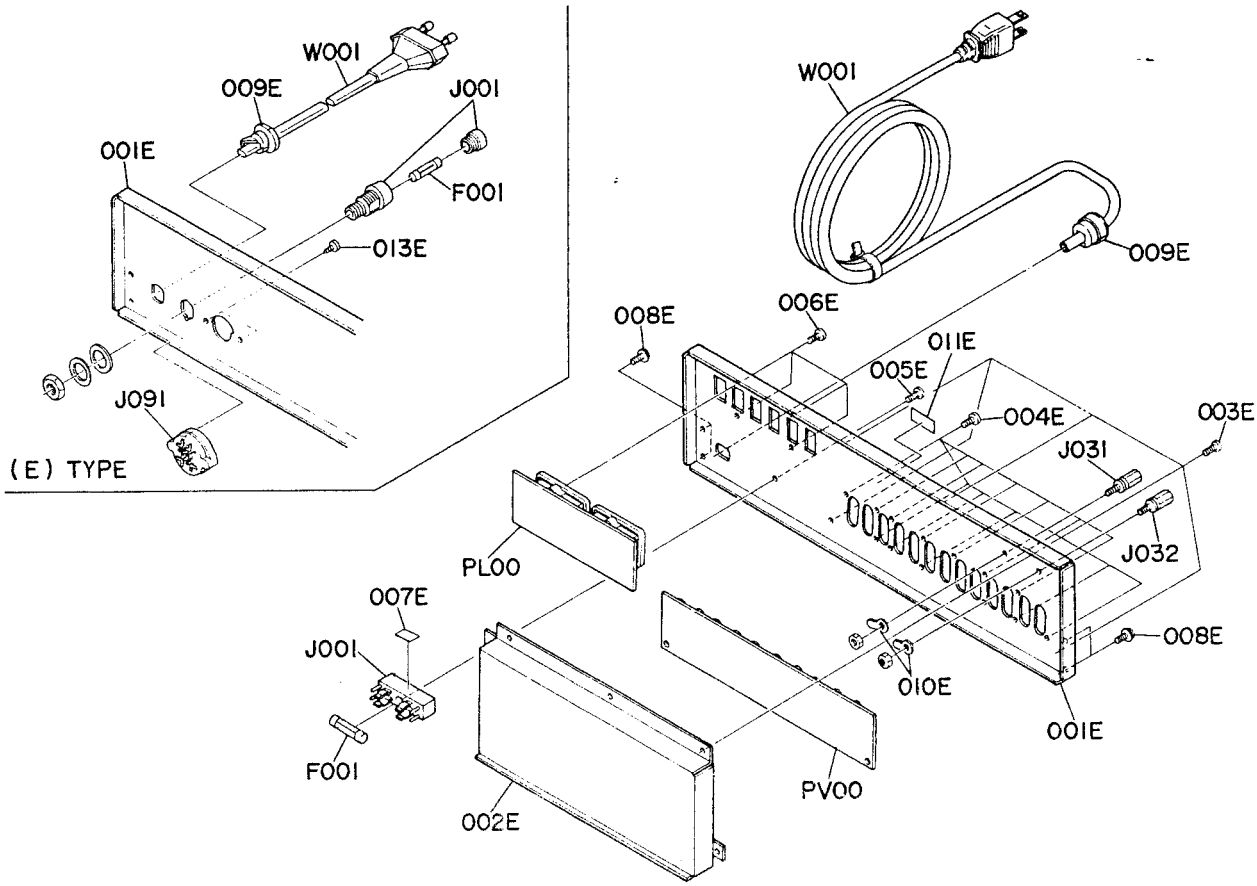
• [H01-99] Wood Case & Packing Materials



REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
001D	1	1	238H072500	Case Assembly, Wood
005D	2	2	238H160030	Bracket
006D	8	8	51523120M0	R.H. Wood Screw
008D	1	1	238H257010	Lid, Bottom Cover
009D	4	4	238H057010	Leg
010D	4	4	51523110M0	R.H. Wood Screw
011D	4	4	54020301M0	Flat Washer, P.
013D	8	8	51280415M0	B.H. Tapped Screw B4 x 15
015D	6	6	51280415M0	B.H. Tapped Screw B4 x 15
018D	1	1	238H109030	Shield
001R	1		2911861140	Label
002R	1		2911861110	Label

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
001S	1	1	238H801010	Packing Case
002S	1	1	238H809010	Cushion
003S	1	1	2864804010	Sleeve
004S	1	1	9014744400	Polyethylene Bag
005S	4		9526019060	Serial No. Card
005S		4	9526019040	Serial No. Card
008S	1	1	ZD01000240	Connective Cord
001T	1		238H851310	User Manual
001T		1	238H851110	User Manual
002T	1		238H851320	User Manual, Spec
002T		1	9631000130	Warranty Card
003T	1		238H856010	Circuit Diagram
003T		1	128T854010	Warranty Card
004T		1	9611000030	User's Card

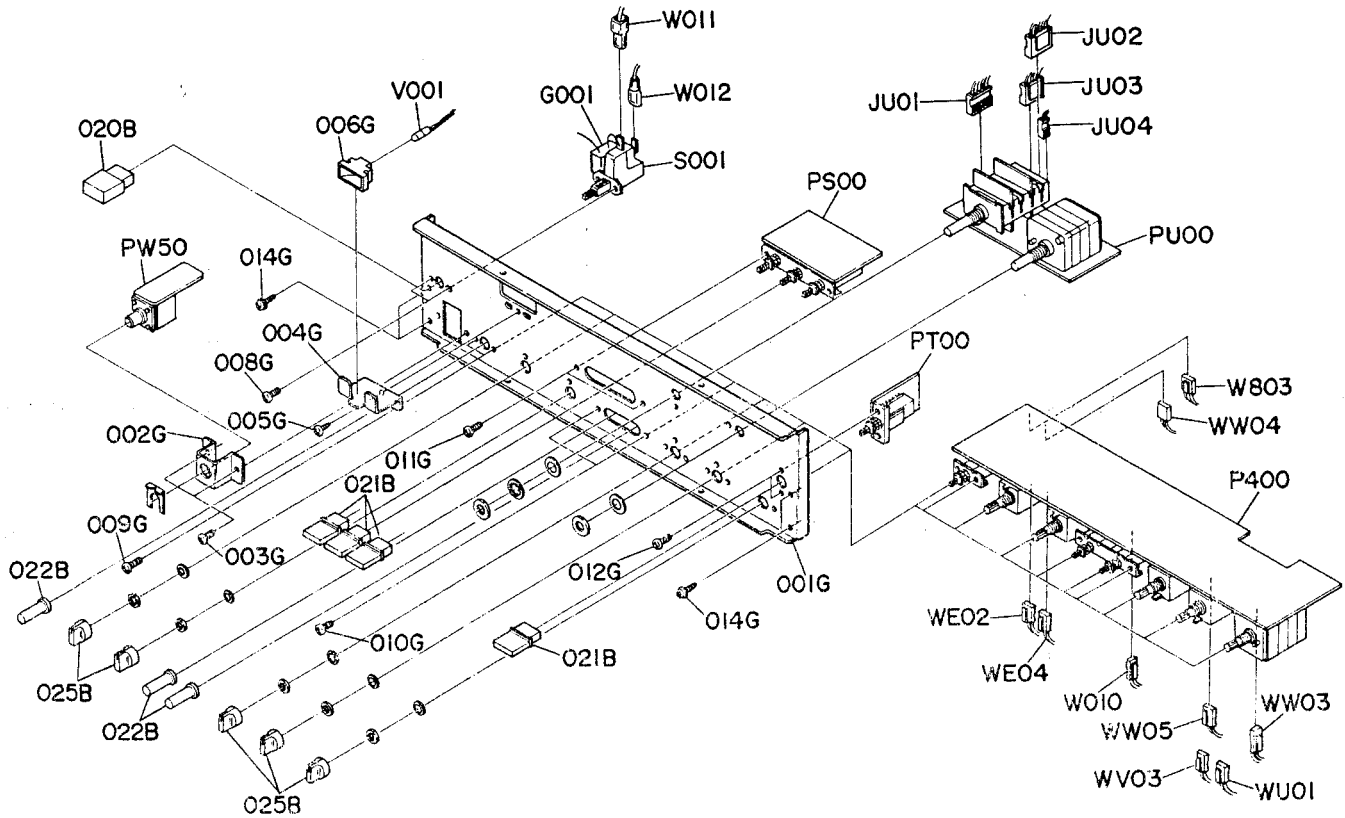
● [P01-99] Rear Panel



REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
001E	1		238H250020	Bracket, Rear Panel
001E		1	238H250010	Bracket, Rear Panel
002E	1	1	238H109010	Shield
003E	5	5	51280308M0	B.H. Tapped Screw B3 x 8
004E	14	14	51280308M0	B.H. Tapped Screw B3 x 8
005E		1	51280308M0	B.H. Tapped Screw B3 x 8
006E		4	51280308M0	B.H. Tapped Screw B3 x 8
007E		1	9510611130	Label, Fuse
008E	4	4	51260306M0	B.T. Screw B3 x 6
009E	1		1455259050	Bushing, AC Cord
009E		1	1455259120	Bushing, AC Cord
010E	3	3	62040029W0	Lug, GND
011E	1	1	2112265010	Indicator, Serial No.
013E	2		51280308M0	B.H. Tapped Screw B3 x 8

REF DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
⚠F001	1		FS10100800	Fuse 1A 250V
⚠F001		1	FS10250600	Fuse 2.5A 250V
⚠J001	1		YJ08000290	Jack, Fuse Holder
⚠J001		1	YJ08000380	Jack, Fuse Holder
J031	1	1	YT01010050	Terminal, GND
J032	1	1	YT01010050	Terminal, GND
⚠J091	1		BY05060060	Voltage Selector
J092	1		YL09040020	Terminal AC Input
⚠W001	1		YC01800220	A.C. Power Cord
⚠W001		1	YC01800240	A.C. Power Cord

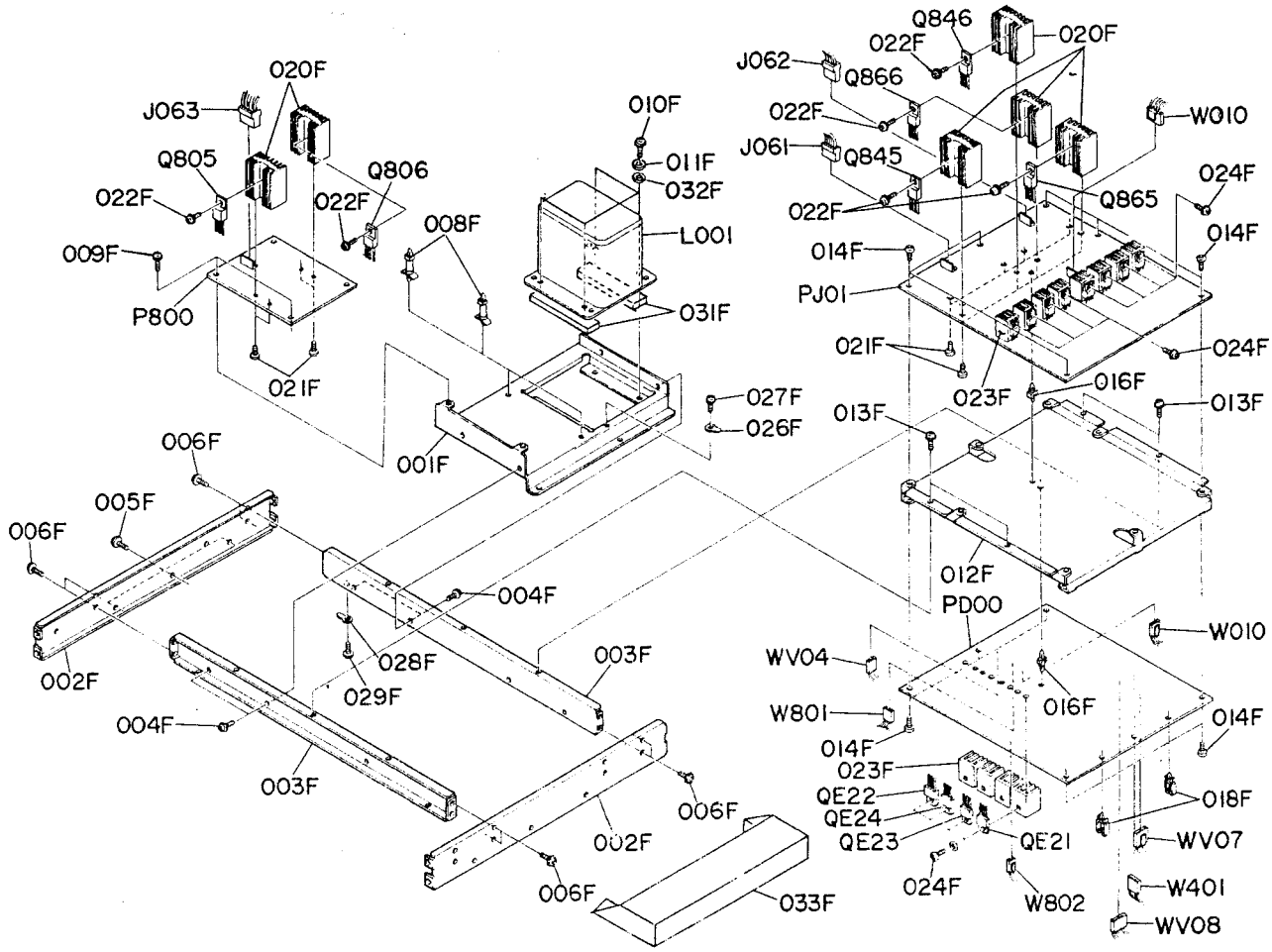
● [P02-99] Front Chassis



REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
020B	1	1	238H270020	Button, Power Switch
021B	4	4	238H270030	Button, Tape Monitor
022B	3	3	238H270010	Button, Pre Out/Mono/Subsonic
025B	5	5	238H154020	Knob, Tone/Balance
001G	1	1	238H105010	Chassis, Front
002G	1	1	238H160010	Bracket, Headphone Jack
003G	2	2	51280308M0	B.H. Tapped Screw B3 x 8
004G	1	1	238H160020	Bracket, Lamp Holder
005G	1	1	51280308M0	B.H. Tapped Screw B3 x 8
006G	1	1	2912259010	Bushing, Lamp
008G	2	2	51100306M9	B.H.M. Screw B3 x 6
009G	2	2	51100306M9	B.H.M. Screw B3 x 6
010G	2	2	51100306M9	B.H.M. Screw B3 x 6
011G	2	2	51100306M9	B.H.M. Screw B3 x 6
012G	2	2	51100306M9	B.H.M. Screw B3 x 6
014G	4	4	51260306M0	B.T. Screw B3 x 6

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
⚠ S001	1	1	SP01010810	Push Switch, Power
V001	1	1	IN10080340	Lamp 60mA 8V
JU01	1	1	YP01001070	Plug
JU02	1	1	YP01001070	Plug
JU03	1	1	YP01001060	Plug
JU04	1	1	YP01001030	Plug
W010	1	1	YB00550050	Connective Cord
W011	1	1	YB00570030	Connective Cord
W012	1	1	YB00470030	Connective Cord
WE02	1	1	YB00250250	Connective Cord
WE04	1	1	YB00240060	Connective Cord
WU01	1	1	YB00280220	Connective Cord
WV03	1	1	YB00570020	Connective Cord
WW03	1	1	YB00580020	Connective Cord
WW04	1	1	YB00280210	Connective Cord
WW05	1	1	YB00570010	Connective Cord
W803	1	1	YB00330040	Connective Cord
G001	1		BF10400060	Cap. Comp. 0.1μF + 120Ω 350V

● [P03-99] Chassis



REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
001F	1	1	238H105020	Chassis, Transformer
002F	2	2	238H105030	Chassis, Side
003F	2	2	238H105040	Chassis, Center
004F	4	4	51280406M0	B.H. Tapped Screw B4 x 6
005F	3	3	51280406M0	B.H. Tapped Screw B4 x 6
006F	8	8	51260306M0	B.T. Screw B3 x 6
008F	2	2	238H101010	Support
009F	2	2	51260306M0	B.T. Screw B3 x 6
010F	4	4	51260410M0	B.T. Screw B4 x 10
011F	4	4	54020401M0	Flat Washer, P.
012F	1	1	238H109020	Shield
013F	4	4	51280308M0	B.H. Tapped Screw B3 x 8
014F	16	16	51280308M0	B.H. Tapped Screw B3 x 8
016F	2	2	3896101010	Support
018F	2	2	2886005050	Clamper
020F	6	6	206H267010	Heatsink
021F	12	12	51280308M0	B.H. Tapped Screw B3 x 8
022F	6	6	51260306M0	B.T. Screw B3 x 6
023F	12	12	238H267010	Heatsink
024F	12	12	51260308M0	B.T. Screw B3 x 8
026F	1	1	62030049W0	Lug, Earth
027F	1	1	51260306M0	B.T. Screw B3 x 6
028F	1	1	62030049W0	Lug, Earth
029F	1	1	51260306M0	B.T. Screw B3 x 6
031F	2	2	238H120010	Insulator Transformer
032F	4	4	203H259020	Bushing Transformer
033F	1	1	238H109050	Sheild

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION	
⚠ L001	1		TS17628020	Power Transformer	
⚠ L001		1	TS17628010	Power Transformer	
⚠ Q805	1	1	HT332982D0	Transistor	2SC3298(O or Y)
⚠ Q806	1	1	HT113062D0	Transistor	2SA1306(O or Y)
Q845	1	1	HT332982D0	Transistor	2SC3298(O or Y)
Q846	1	1	HT113062D0	Transistor	2SA1306(O or Y)
Q865	1	1	HT332982D0	Transistor	2SC3298(O or Y)
Q866	1	1	HT113062D0	Transistor	2SA1306(O or Y)
QE21	1	1	HT332982D0	Transistor	2SC3298(O or Y)
QE22	1	1	HT332982D0	Transistor	2SC3298(O or Y)
QE23	1	1	HT113062D0	Transistor	2SA1306(O or Y)
QE24	1	1	HT113062D0	Transistor	2SA1306(O or Y)
J061	1	1	YJ10002010	Jack	
J062	1	1	YJ10002010	Jack	
J063	1	1	YJ10002010	Jack	
W010	1	1	YB00550050	Connective Cord	
W401	1	1	YB00330030	Connective Cord	
W801	1	1	YB00270080	Connective Cord	
W802	1	1	YB00380100	Connective Cord	
WV04	1	1	YB00140100	Connective Cord	
WV07	1	1	YB00130150	Connective Cord	
WV08	1	1	YB00130160	Connective Cord	

8. ELECTRICAL PARTS LIST

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION		
				P400-PHONO AMP CIRCUIT BOARD		
P400	1	1	YK238H2210	P.W. Board, Phono Amp		
	1		ZZ238H8210	P.W. Board Assembly		
				P400-CAPACITORS		
C401	1	1	DF55101520	Film	100pF ±5%	
C402	1	1	DF55101520	Film	100pF ±5%	
C403	1	1	DF74272010	Film	2700pF ±2%	
C404	1	1	DF74272010	Film	2700pF ±2%	
C405	1	1	DF74272010	Film	2700pF ±2%	
C406	1	1	DF74272010	Film	2700pF ±2%	
C407	1	1	DF55181520	Film	180pF ±5%	
C408	1	1	DF55181520	Film	180pF ±5%	
C409	1	1	DF74273010	Film	0.027μF ±2%	
C410	1	1	DF74273010	Film	0.027μF ±2%	
C411	1	1	DF74394020	Film	0.39μF ±2%	
C412	1	1	DF74394020	Film	0.39μF ±2%	
C413	1	1	EA47705010	Elect	470μF	50V
C414	1	1	EA47705010	Elect	470μF	50V
C415	1	1	EA47705010	Elect	470μF	50V
C416	1	1	EA47705010	Elect	470μF	50V
C417	1	1	OA22603510	Elect	22μF	35V
C418	1	1	OA22603510	Elect	22μF	35V
C419	1	1	OA22603510	Elect	22μF	35V
C420	1	1	OA22603510	Elect	22μF	35V
C421	1	1	OA10605010	Elect	10μF	50V
C422	1	1	OA10605010	Elect	10μF	50V
C423	1	1	OA10605010	Elect	10μF	50V
C424	1	1	OA10605010	Elect	10μF	50V
C841	1	1	DF16104510	Film	0.1μF ±10%	
⚠ C843	1	1	OB22806310	Elect	2200μF	63V
⚠ C844	1	1	OB22806310	Elect	2200μF	63V
C845	1	1	OA10606310	Elect	10μF	63V
C846	1	1	OA10606310	Elect	10μF	63V
C849	1	1	OA47601610	Elect	47μF	16V
C850	1	1	OA47601610	Elect	47μF	16V
C853	1	1	EA47705060	Elect	470μF	50V
C854	1	1	EA47705060	Elect	470μF	50V
C861	1	1	DF16104510	Film	0.1μF ±10%	
⚠ C863	1	1	OB22805010	Elect	2200μF	50V
⚠ C864	1	1	OB22805010	Elect	2200μF	50V
C865	1	1	OA10605010	Elect	10μF	50V
C866	1	1	OA10605010	Elect	10μF	50V
C869	1	1	OA47601610	Elect	47μF	16V
C870	1	1	OA47601610	Elect	47μF	16V
C873	1	1	EA47703510	Elect	470μF	35V
C874	1	1	EA47703510	Elect	470μF	35V
CG01	1	1	DF14683010	Film	0.068μF ±2%	
CG02	1	1	DF14683010	Film	0.068μF ±2%	
CG03	1	1	DF74152010	Film	1500pF ±2%	
CG04	1	1	DF74152010	Film	1500pF ±2%	
CG05	1	1	DF74152010	Film	1500pF ±2%	

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION		
CG06	1	1	DF74152010	Film	1500pF ±2%	
CG07	1	1	DF55221520	Film	220pF ±5%	
CG08	1	1	DF55221520	Film	220pF ±5%	
CG11	1	1	OA22603510	Elect	22μF	35V
CG12	1	1	OA22603510	Elect	22μF	35V
CG13	1	1	OA22603510	Elect	22μF	35V
CG14	1	1	OA22603510	Elect	22μF	35V
CG15	1	1	DF55102010	Film	1000pF ±5%	
CG16	1	1	DF55102010	Film	1000pF ±5%	
CG17	1	1	EA47703510	Elect	470μF	35V
CG18	1	1	EA47703510	Elect	470μF	35V
CG19	1	1	EA47703510	Elect	470μF	35V
CG20	1	1	EA47703510	Elect	470μF	35V
CG21	1	1	OA22603510	Elect	22μF	35V
CG22	1	1	OA22603510	Elect	22μF	35V
CG23	1	1	OA22603510	Elect	22μF	35V
CG24	1	1	OA22603510	Elect	22μF	35V
CG25	1	1	OA10605010	Elect	10μF	50V
CG26	1	1	OA10605010	Elect	10μF	50V
CG27	1	1	OA10605010	Elect	10μF	50V
CG28	1	1	OA10605010	Elect	10μF	50V
				P400-RESISTORS (All Resistors are ±2% and ¼W)		
R401	1	1	GM214562G0	56.2Ω		
R402	1	1	GM214562G0	56.2Ω		
R403	1	1	GM21446420	46.4KΩ		
R404	1	1	GM21446420	46.4KΩ		
R405	1	1	GM214100G0	10Ω		
R406	1	1	GM214100G0	10Ω		
R407	1	1	GM214100G0	10Ω		
R408	1	1	GM214100G0	10Ω		
R409	1	1	GM214681G0	68.1Ω		
R410	1	1	GM214681G0	68.1Ω		
R411	1	1	GM214681G0	68.1Ω		
R412	1	1	GM214681G0	68.1Ω		
R413	1	1	GM214681G0	68.1Ω		
R414	1	1	GM214681G0	68.1Ω		
R415	1	1	GM214681G0	68.1Ω		
R416	1	1	GM214681G0	68.1Ω		
R417	1	1	GM21446400	464Ω		
R418	1	1	GM21446400	464Ω		
R419	1	1	GM21446400	464Ω		
R420	1	1	GM21446400	464Ω		
R421	1	1	GM21438320	38.3KΩ		
R422	1	1	GM21438320	38.3KΩ		
R423	1	1	GM21438320	38.3KΩ		
R424	1	1	GM21438320	38.3KΩ		
R425	1	1	GM21468110	6.81KΩ		
R426	1	1	GM21468110	6.81KΩ		
R427	1	1	GM21468110	6.81KΩ		
R428	1	1	GM21468110	6.81KΩ		
R429	1	1	GM214464G0	46.4Ω		
R430	1	1	GM214464G0	46.4Ω		

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
R431	1	1	GM21414710	1.47KΩ
R432	1	1	GM21414710	1.47KΩ
R433	1	1	GM21419610	1.96KΩ
R434	1	1	GM21419610	1.96KΩ
R435	1	1	GM21412120	12.1KΩ
R436	1	1	GM21412120	12.1KΩ
R437	1	1	GM21412130	121KΩ
R438	1	1	GM21412130	121KΩ
R439	1	1	GM21482500	825Ω
R440	1	1	GM21482500	825Ω
R441	1	1	GM21482500	825Ω
R442	1	1	GM21482500	825Ω
R443	1	1	GM21482500	825Ω
R444	1	1	GM21482500	825Ω
R445	1	1	GM21482500	825Ω
R446	1	1	GM21482500	825Ω
R447	1	1	GM21423720	23.7KΩ
R448	1	1	GM21423720	23.7KΩ
R449	1	1	GM21423720	23.7KΩ
R450	1	1	GM21423720	23.7KΩ
R451	1	1	GM214619G0	61.9Ω
R452	1	1	GM214619G0	61.9Ω
R453	1	1	GM214619G0	61.9Ω
R454	1	1	GM214619G0	61.9Ω
R455	1	1	GM21482510	8.25KΩ
R456	1	1	GM21482510	8.25KΩ
R457	1	1	GG05047140	4.7Ω ±5%
R458	1	1	GG05047140	4.7Ω ±5%
R459	1	1	GG05047140	4.7Ω ±5%
R460	1	1	GG05047140	4.7Ω ±5%
R461	1	1	GG05470140	47Ω ±5%
R462	1	1	GG05470140	47Ω ±5%
R463	1	1	GG05470140	47Ω ±5%
R464	1	1	GG05470140	47Ω ±5%
R469	1	1	GM21427420	27.4KΩ
R470	1	1	GM21427420	27.4KΩ
R471	1	1	GM21427420	27.4KΩ
R472	1	1	GM21427420	27.4KΩ
R473	1	1	GM21414720	14.7KΩ
R474	1	1	GM21414720	14.7KΩ
R475	1	1	GM21414720	14.7KΩ
R476	1	1	GM21414720	14.7KΩ
R477	1	1	GM21410030	100KΩ
R478	1	1	GM21410030	100KΩ
R479	1	1	GM21410030	100KΩ
R480	1	1	GM21410030	100KΩ
R481	1	1	GM21446410	4.64KΩ
R482	1	1	GM21446410	4.64KΩ
R483	1	1	GM21446410	4.64KΩ
R484	1	1	GM21446410	4.64KΩ
R485	1	1	GM21421510	2.15KΩ
R486	1	1	GM21421510	2.15KΩ
R487	1	1	GM21446410	4.64KΩ
R488	1	1	GM21446410	4.64KΩ

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
R841	1	1	GM21414700	147Ω
R843	1	1	GM21438320	38.3KΩ
R844	1	1	GM21438320	38.3KΩ
R845	1	1	GM21456200	562Ω
R846	1	1	GM21456200	562Ω
R847	1	1	GM21427410	2.74KΩ
R848	1	1	GM21427410	2.74KΩ
R849	1	1	GM21456200	562Ω
R850	1	1	GM21456200	562Ω
R851	1	1	GM21433220	33.2KΩ
R852	1	1	GM21433220	33.2KΩ
R853	1	1	GM21442210	4.22KΩ
R854	1	1	GM21442210	4.22KΩ
R855	1	1	GM21412110	1.21KΩ
R856	1	1	GM21412110	1.21KΩ
R861	1	1	GM21412100	121Ω
R863	1	1	GM21421520	21.5KΩ
R864	1	1	GM21421520	21.5KΩ
R865	1	1	GM21456200	562Ω
R866	1	1	GM21456200	562Ω
R867	1	1	GM21427410	2.74KΩ
R868	1	1	GM21427410	2.74KΩ
R869	1	1	GM21456200	562Ω
R870	1	1	GM21456200	562Ω
R871	1	1	GM21421520	21.5KΩ
R872	1	1	GM21421520	21.5KΩ
R873	1	1	GM21427410	2.74KΩ
R874	1	1	GM21427410	2.74KΩ
R875	1	1	GM21412110	1.21KΩ
R876	1	1	GM21412110	1.21KΩ
R877	1	1	GM21421520	21.5KΩ
R878	1	1	GM21421520	21.5KΩ
RG01	1	1	GM21411010	1.1KΩ
RG02	1	1	GM21411010	1.1KΩ
RG03	1	1	GM21410030	100KΩ
RG04	1	1	GM21410030	100KΩ
RG05	1	1	GM21433200	332Ω
RG06	1	1	GM21433200	332Ω
RG07	1	1	GM21433200	332Ω
RG08	1	1	GM21433200	332Ω
RG09	1	1	GM214562G0	56.2Ω
RG10	1	1	GM214562G0	56.2Ω
RG11	1	1	GM214562G0	56.2Ω
RG12	1	1	GM214562G0	56.2Ω
RG13	1	1	GM21410010	1KΩ
RG14	1	1	GM21410010	1KΩ
RG15	1	1	GM21410010	1KΩ
RG16	1	1	GM21410010	1KΩ
RG17	1	1	GM21421520	21.5KΩ
RG18	1	1	GM21421520	21.5KΩ
RG19	1	1	GM21421520	21.5KΩ
RG20	1	1	GM21421520	21.5KΩ
RG21	1	1	GM21446410	4.64KΩ
RG22	1	1	GM21446410	4.64KΩ
RG23	1	1	GM21446410	4.64KΩ
RG24	1	1	GM21446410	4.64KΩ
RG25	1	1	GM21419600	196Ω

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
RG26	1	1	GM21419600	196Ω
RG27	1	1	GM21451100	511Ω
RG28	1	1	GM21451100	511Ω
RG31	1	1	GM21410020	10KΩ
RG32	1	1	GM21410020	10KΩ
RG33	1	1	GM21421510	2.15KΩ
RG34	1	1	GM21421510	2.15KΩ
RG35	1	1	GM21421510	2.15KΩ
RG36	1	1	GM21421510	2.15KΩ
RG37	1	1	GM21421510	2.15KΩ
RG38	1	1	GM21421510	2.15KΩ
RG39	1	1	GM21421510	2.15KΩ
RG40	1	1	GM21421510	2.15KΩ
RG41	1	1	GM21416220	16.2KΩ
RG42	1	1	GM21416220	16.2KΩ
RG43	1	1	GM21416220	16.2KΩ
RG44	1	1	GM21416220	16.2KΩ
RG45	1	1	GM214511G0	51.1Ω
RG46	1	1	GM214511G0	51.1Ω
RG47	1	1	GM214511G0	51.1Ω
RG48	1	1	GM214511G0	51.1Ω
RG49	1	1	GG05047140	4.7Ω ±5%
RG50	1	1	GG05047140	4.7Ω ±5%
RG51	1	1	GG05047140	4.7Ω ±5%
RG52	1	1	GG05047140	4.7Ω ±5%
RG53	1	1	GM21421500	215Ω
RG54	1	1	GM21421500	215Ω
RG55	1	1	GM21410030	100KΩ
RG56	1	1	GM21410030	100KΩ
RG57	1	1	GG05470140	47Ω ±5%
RG58	1	1	GG05470140	47Ω ±5%
RG59	1	1	GG05470140	47Ω ±5%
RG60	1	1	GG05470140	47Ω ±5%
RG65	1	1	GM21417820	17.8KΩ
RG66	1	1	GM21417820	17.8KΩ
RG67	1	1	GM21417820	17.8KΩ
RG68	1	1	GM21417820	17.8KΩ
RG69	1	1	GM21414720	14.7KΩ
RG70	1	1	GM21414720	14.7KΩ
RG71	1	1	GM21414720	14.7KΩ
RG72	1	1	GM21414720	14.7KΩ
RG73	1	1	GM21410030	100KΩ
RG74	1	1	GM21410030	100KΩ
RG75	1	1	GM21410030	100KΩ
RG76	1	1	GM21410030	100KΩ
RG77	1	1	GM21446410	4.64KΩ
RG78	1	1	GM21446410	4.64KΩ
RG79	1	1	GM21446410	4.64KΩ
RG80	1	1	GM21446410	4.64KΩ
RG81	1	1	GM21421510	2.15KΩ
RG82	1	1	GM21421510	2.15KΩ
RG83	1	1	GM21446410	4.64KΩ
RG84	1	1	GM21446410	4.64KΩ

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCIRPTION
				P400-SEMICONDUCTORS
⚠D841	1	1	HD20011010	Diode W06C
⚠D842	1	1	HD20011010	Diode W06C
⚠D843	1	1	HD20011010	Diode W06C
⚠D844	1	1	HD20011010	Diode W06C
D845	1	1	HD30045010	Zener HZ9C1L
D846	1	1	HD30045010	Zener HZ9C1L
⚠D861	1	1	HD20005010	Diode W06B
⚠D862	1	1	HD20005010	Diode W06B
⚠D863	1	1	HD20005010	Diode W06B
⚠D864	1	1	HD20005010	Diode W06B
D865	1	1	HD30045010	Zener HZ9C1L
D866	1	1	HD30045010	Zener HZ9C1L
Q401	1	1	HF203691B0	F.E.T. 2SK369(BL)
Q402	1	1	HF203691B0	F.E.T. 2SK369(BL)
Q403	1	1	HF101111B0	F.E.T. 2SJ111(BL)
Q404	1	1	HF101111B0	F.E.T. 2SJ111(BL)
Q405	1	1	HF203691B0	F.E.T. 2SK369(BL)
Q406	1	1	HF203691B0	F.E.T. 2SK369(BL)
Q407	1	1	HF101111B0	F.E.T. 2SJ111(BL)
Q408	1	1	HF101111B0	F.E.T. 2SJ111(BL)
Q409	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q410	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q411	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q412	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q413	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q414	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q415	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q416	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q417	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q418	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q419	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q420	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q421	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q422	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q423	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q424	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q425	1	1	HT332982D0	Transistor 2SC3298(O or Y)
Q426	1	1	HT332982D0	Transistor 2SC3298(O or Y)
Q427	1	1	HT113062D0	Transistor 2SA1306(O or Y)
Q428	1	1	HT113062D0	Transistor 2SA1306(O or Y)
Q429	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q430	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q431	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q432	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q433	1	1	HC10026090	IC NJM2041DD
Q434	1	1	HC10026090	IC NJM2041DD
Q841	1	1	HF202461C0	F.E.T. 2SK246(GR)
Q842	1	1	HF202461C0	F.E.T. 2SK246(GR)
⚠Q843	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
⚠Q844	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
⚠Q845	1	1	HT332982D0	Transistor 2SC3298(O or Y)
⚠Q846	1	1	HT113062D0	Transistor 2SA1306(O or Y)
Q847	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q848	1	1	HT113162A0	Transistor 2SA1316(GR or BL)

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
Q861	1	1	HF202461C0	F.E.T. 2SK246(GR)
Q862	1	1	HF202461C0	F.E.T. 2SK246(GR)
⚠Q863	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
⚠Q864	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
⚠Q865	1	1	HT332982D0	Transistor 2SC3298(O or Y)
⚠Q866	1	1	HT113062D0	Transistor 2SA1306(O or Y)
Q867	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q868	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG01	1	1	HF203691B0	F.E.T. 2SK369(BL)
QG02	1	1	HF203691B0	F.E.T. 2SK369(BL)
QG03	1	1	HF101111B0	F.E.T. 2SJ111(BL)
QG04	1	1	HF101111B0	F.E.T. 2SJ111(BL)
QG05	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QG06	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QG07	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG08	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG09	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG10	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG11	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QG12	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QG13	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG14	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG15	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QG16	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QG17	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG18	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG19	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QG20	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QG21	1	1	HT332982D0	Transistor 2SC3298(O or Y)
QG22	1	1	HT332982D0	Transistor 2SC3298(O or Y)
QG23	1	1	HT113062D0	Transistor 2SA1306(O or Y)
QG24	1	1	HT113062D0	Transistor 2SA1306(O or Y)
QG25	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QG26	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QG27	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG28	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QG29	1	1	HC10026090	IC NJM2041DD
QG30	1	1	HC10026090	IC NJM2041DD
				P400-MISCELLANEOUS
⚠J841	1	1	YP10002580	Plug, 4P
⚠J861	1	1	YP10002580	Plug, 4P
J862	1	1	YP01001060	Plug, 6P
W401	1	1	YB00330030	Connective Cord, 4P
WG01	1	1	YB00260120	Connective Cord, 4P
WG02	1	1	YB00260130	Connective Cord, 4P

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
				P800-12V AVR CIRCUIT BOARD
P800	1	1	YN238H2210	P.W. Board, 12V AVR
	1	1	ZZ238H2210	P.W. Board Assembly
				P800-CAPACITORS
⚠C801	1	1	OB56802510	Elect 5600μF 25V
⚠C802	1	1	OB56802510	Elect 5600μF 25V
C803	1	1	OA10605010	Elect 10μF 50V
C804	1	1	OA10605010	Elect 10μF 50V
C807	1	1	OA47601010	Elect 47μF 10V
C808	1	1	OA47601010	Elect 47μF 10V
C811	1	1	OA47701610	Elect 470μF 16V
C812	1	1	OA47701610	Elect 470μF 16V
⚠C813	1	1	OA22603510	Elect 22μF 35V
⚠C814	1	1	OA47505010	Elect 4.7μF 50V
C815	1	1	OA47601010	Elect 47μF 10V
C816	1	1	OA47601010	Elect 47μF 10V
C817	1	1	OA47601010	Elect 47μF 10V
C818	1	1	OA47505010	Elect 4.7μF 50V
C819	1	1	DF16104510	Film 0.1μF ±10%
C821	1	1	OF15103010	Film 0.01μF ±5%
				P800-RESISTORS (All Resistors are ±2% and ¼W)
R801	1	1	GM21410020	10KΩ
R802	1	1	GM21410020	10KΩ
R803	1	1	GM21456200	562Ω
R804	1	1	GM21456200	562Ω
R805	1	1	GM21427410	2.74KΩ
R806	1	1	GM21427410	2.74KΩ
R807	1	1	GM21456200	562Ω
R808	1	1	GM21456200	562Ω
R809	1	1	GM21427410	2.74KΩ
R810	1	1	GM21427410	2.74KΩ
R811	1	1	GM21411010	1.10KΩ
R812	1	1	GM21411010	1.10KΩ
R813	1	1	GM21414710	1.47KΩ
R814	1	1	GM21414710	1.47KΩ
R815	1	1	GM21490910	9.09KΩ
R816	1	1	GM21490910	9.09KΩ
R817	1	1	GM21412100	121Ω
R819	1	1	GM21410020	10KΩ
R820	1	1	GM21410020	10KΩ
R821	1	1	GM21456210	5.62KΩ
R822	1	1	GM21482520	82.5KΩ
R823	1	1	GM21446420	46.4KΩ
R824	1	1	GM21421530	215KΩ
R825	1	1	GM21421500	215Ω
R826	1	1	GM21421510	2.15KΩ
R827	1	1	GM21410020	10KΩ
R828	1	1	GM21456220	56.2KΩ
R829	1	1	GM21456220	56.2KΩ
R832	1	1	GM21438310	3.83KΩ
R833	1	1	NK05271020	270Ω ±5% 2W

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
				P800-SEMICONDUCTORS
⚠D801	1	1	HD20005010	Diode W06B
⚠D802	1	1	HD20005010	Diode W06B
⚠D803	1	1	HD20005010	Diode W06B
⚠D804	1	1	HD20005010	Diode W06B
⚠D805	1	1	HD20005010	Diode W06B
D806	1	1	HD20005010	Diode W06B
D807	1	1	HD20005010	Diode W06B
⚠D808	1	1	HD20005010	Diode W06B
D809	1	1	HD30023010	Zener HZ6C1L
D810	1	1	HD30023010	Zener HZ6C1L
Q801	1	1	HF202461C0	F.E.T. 2SK246
Q802	1	1	HF202461C0	F.E.T. 2SK246
⚠Q803	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
⚠Q804	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
⚠Q805	1	1	HT332982D0	Transistor 2SC3298(GR or BL)
⚠Q806	1	1	HT113062D0	Transistor 2SA1306(GR or BL)
Q807	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
Q808	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
Q809	1	1	HT112252A0	Transistor 2SA1225(O or Y)
Q810	1	1	HC10042050	IC TA7317P
				P800-MISCELLANEOUS
⚠J801	1	1	YP10002580	Plug, 4P
J802	1	1	YP06001040	Plug, 3P
J803	1	1	YP06001040	Plug, 3P
J804	1	1	YP06001040	Plug, 3P
J805	1	1	YP06001040	Plug, 3P
J806	1	1	YP06001040	Plug, 3P
W801	1	1	YB00270080	Connective Cord, 3P
W802	1	1	YB00380100	Connective Cord, 3P
W803	1	1	YB00330040	Connective Cord, 3P
				PD00-MC HEAD AMP CIRCUIT BOARD
PD00	1	1	YK238H1510	P.W. Board, Mic Head Amp
	1	1	ZZ238H8510	P.W. Board Assembly
				PD00-CAPACITORS
C881	1	1	OA47701660	Elect 470μF 16V
C882	1	1	OA47701660	Elect 470μF 16V
C883	1	1	OA47701660	Elect 470μF 16V
C884	1	1	OA47701660	Elect 470μF 16V
C885	1	1	OA10605010	Elect 10μF 50V
C886	1	1	OA10605010	Elect 10μF 50V
C887	1	1	OA10605010	Elect 10μF 50V
C888	1	1	OA10605010	Elect 10μF 50V
CD01	1	1	OA47700610	Elect 470μF 6.3V
CD02	1	1	OA47700610	Elect 470μF 6.3V
CD03	1	1	OA47700610	Elect 470μF 6.3V
CD04	1	1	OA47700610	Elect 470μF 6.3V
CD05	1	1	OA22701010	Elect 220μF 10V
CD06	1	1	OA22701010	Elect 220μF 10V
CD07	1	1	OA22701010	Elect 220μF 10V
CD08	1	1	OA22701010	Elect 220μF 10V
CD09	1	1	OF15103010	Film 0.01μF ±5%
CD10	1	1	OF15103010	Film 0.01μF ±5%

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
CD11	1	1	OF15153010	Film 0.015μF ±5%
CD12	1	1	OF15153010	Film 0.015μF ±5%
CD13	1	1	OF15153010	Film 0.015μF ±5%
CD14	1	1	OF15153010	Film 0.015μF ±5%
CD15	1	1	OF15563010	Film 0.056μF ±5%
CD16	1	1	OF15563010	Film 0.056μF ±5%
CD17	1	1	DF55331520	Film 330pF ±5%
CD18	1	1	DF55331520	Film 330pF ±5%
CD19	1	1	OA47601610	Elect 47μF 16V
CD20	1	1	OA47601610	Elect 47μF 16V
CD21	1	1	OA47601610	Elect 47μF 16V
CD22	1	1	OA47601610	Elect 47μF 16V
CD23	1	1	DF55332010	Film 3300pF ±5%
CD24	1	1	DF55332010	Film 3300pF ±5%
CE01	1	1	DF35680520	Mica 68pF ±5%
CE02	1	1	DF35680520	Mica 68pF ±5%
CE03	1	1	OF15222010	Film 2200pF ±5%
CE04	1	1	OF15222010	Film 2200pF ±5%
CE05	1	1	OF15222010	Film 2200pF ±5%
CE06	1	1	OF15222010	Film 2200pF ±5%
CE07	1	1	DF35161520	Mica 160pF ±5%
CE08	1	1	DF35161520	Mica 160pF ±5%
CE09	1	1	DF55222520	Film 2200pF ±5%
CE10	1	1	DF55222520	Film 2200pF ±5%
CE11	1	1	DF55561520	Film 560pF ±5%
CE12	1	1	DF55561520	Film 560pF ±5%
CE13	1	1	EA44703510	Elect 470μF 35V
CE14	1	1	EA47703510	Elect 470μF 35V
CE15	1	1	EA47703510	Elect 470μF 35V
CE16	1	1	EA47703510	Elect 470μF 35V
CE17	1	1	OA22603510	Elect 22μF 35V
CE18	1	1	OA22603510	Elect 22μF 35V
CE19	1	1	OA22603510	Elect 22μF 35V
CE20	1	1	OA22603510	Elect 22μF 35V
CE21	1	1	OA10605010	Elect 10μF 50V
CE22	1	1	OA10605010	Elect 10μF 50V
CE23	1	1	OA10605010	Elect 10μF 50V
CE24	1	1	OA10605010	Elect 10μF 50V
				PD00-RESISTORS (All Resistors are ±2% and ¼W)
R881	1	1	GG05330140	33Ω
R882	1	1	GG05330140	33Ω
R883	1	1	GG05330140	33Ω
R884	1	1	GG05330140	33Ω
R885	1	1	GM21410020	10KΩ
R886	1	1	GM21410020	10KΩ
R887	1	1	GM21410020	10KΩ
R888	1	1	GM21410020	10KΩ
R889	1	1	GM21410030	100KΩ
R890	1	1	GM21410030	100KΩ
R891	1	1	GM21410030	100KΩ
R892	1	1	GM21410030	100KΩ

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
RD01	1	1	GM21410020	10KΩ
RD02	1	1	GM21410020	10KΩ
RD03	1	1	GM21410000	100Ω
RD04	1	1	GM21410000	100Ω
RD05	1	1	GM214220S0	2.2Ω
RD06	1	1	GM214220S0	2.2Ω
RD07	1	1	GM214220S0	2.2Ω
RD08	1	1	GM214220S0	2.2Ω
RD09	1	1	GM21421510	2.15KΩ
RD10	1	1	GM21421510	2.15KΩ
RD11	1	1	GM21421510	2.15KΩ
RD12	1	1	GM21421510	2.15KΩ
RD13	1	1	GM21417810	1.78KΩ
RD14	1	1	GM21417810	1.78KΩ
RD15	1	1	GM21417810	1.78KΩ
RD16	1	1	GM21417810	1.78KΩ
RD17	1	1	GM21412100	121Ω
RD18	1	1	GM21412100	121Ω
RD19	1	1	GM214100S0	1Ω
RD20	1	1	GM214100S0	1Ω
RD21 ≀ RD44	24	24	GM214220S0	2.2Ω
RD45 ≀ RD54	10	10	GM21410010	1KΩ
RD55	1	1	GM21421510	2.15KΩ
RD56	1	1	GM21421510	2.15KΩ
RD57	1	1	GM214215G0	21.5Ω
RD58	1	1	GM214215G0	21.5Ω
RD59 ≀ RD66	8	8	GM21421510	2.15KΩ
RD67	1	1	GM21468100	681Ω
RD68	1	1	GM21468100	681Ω
RD69	1	1	GM21468100	681Ω
RD70	1	1	GM21468100	681Ω
RD71	1	1	GM21427420	27.4KΩ
RD72	1	1	GM21427420	27.4KΩ
RD73	1	1	GM21436500	365Ω
RD74	1	1	GM21436500	365Ω
RD75	1	1	GM21436500	365Ω
RD76	1	1	GM21436500	365Ω
RD77	1	1	GM21421500	215Ω
RD78	1	1	GM21421500	215Ω
RD79	1	1	GM21421500	215Ω
RD80	1	1	GM21421500	215Ω
RD81 ≀ RD92	12	12	GM214100G0	10Ω
RD93	1	1	GM21421500	215Ω
RD94	1	1	GM21421500	215Ω
RD95	1	1	GM21421520	21.5KΩ
RD96	1	1	GM21421520	21.5KΩ
RE01	1	1	GM214383G0	38.3Ω
RE02	1	1	GM214383G0	38.3Ω
RE03	1	1	GM21410030	100KΩ
RE04	1	1	GM21410030	100KΩ
RE05	1	1	GM21433200	332Ω

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION	
RE06	1	1	GM21433200	332Ω	
RE07	1	1	GM21433200	332Ω	
RE08	1	1	GM21433200	332Ω	
RE09	1	1	GM21410010	1KΩ	
RE10	1	1	GM21410010	1KΩ	
RE11	1	1	GM21410010	1KΩ	
RE12	1	1	GM21410010	1KΩ	
RE13	1	1	GM214383G0	38.3Ω	
RE14	1	1	GM214383G0	38.3Ω	
RE15	1	1	GM214383G0	38.3Ω	
RE16	1	1	GM214383G0	38.3Ω	
RE17	1	1	GM21427420	27.4KΩ	
RE18	1	1	GM21427420	27.4KΩ	
RE19	1	1	GM21427420	27.4KΩ	
RE20	1	1	GM21427420	27.4KΩ	
RE21	1	1	GM21438310	3.83KΩ	
RE22	1	1	GM21438310	3.83KΩ	
RE23	1	1	GM21438310	3.83KΩ	
RE24	1	1	GM21438310	3.83KΩ	
RE25 ≀ RE32	8	8	GM21410010	1KΩ	
RE33	1	1	GM21433220	33.2KΩ	
RE34	1	1	GM21433220	33.2KΩ	
RE35	1	1	GM21416210	1.62KΩ	
RE36	1	1	GM21416210	1.62KΩ	
RE37	1	1	GM21436520	36.5KΩ	
RE38	1	1	GM21436520	36.5KΩ	
RE39	1	1	GM21436520	36.5KΩ	
RE40	1	1	GM21436520	36.5KΩ	
RE41	1	1	GM21412100	121Ω	
RE42	1	1	GM21412100	121Ω	
RE43	1	1	GM21412100	121Ω	
RE44	1	1	GM21412100	121Ω	
RE45	1	1	GG05047140	4.7Ω	±5%
RE46	1	1	GG05047140	4.7Ω	±5%
RE47	1	1	GG05047140	4.7Ω	±5%
RE48	1	1	GG05047140	4.7Ω	±5%
RE49	1	1	GM214511G0	51.1Ω	
RE50	1	1	GM214511G0	51.1Ω	
RE51	1	1	GM21410030	100KΩ	
RE52	1	1	GM21410030	100KΩ	
RE53	1	1	GM21417830	178KΩ	
RE54	1	1	GM21417830	178KΩ	
RE55	1	1	GM21419620	19.6KΩ	
RE56	1	1	GM21419620	19.6KΩ	
RE57	1	1	GG05470140	47Ω	±5%
RE58	1	1	GG05470140	47Ω	±5%
RE59	1	1	GG05470140	47Ω	±5%
RE60	1	1	GG05470140	47Ω	±5%
RE61	1	1	GM21433220	33.2KΩ	
RE62	1	1	GM21433220	33.2KΩ	
RE63	1	1	GM21433220	33.2KΩ	
RE64	1	1	GM21433220	33.2KΩ	
RE65	1	1	GM21417820	17.8KΩ	
RE66	1	1	GM21417820	17.8KΩ	
RE67	1	1	GM21417820	17.8KΩ	
RE68	1	1	GM21417820	17.8KΩ	
RE69	1	1	GM21414720	14.7KΩ	

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
RE70	1	1	GM21414720	14.7KΩ
RE71	1	1	GM21414720	14.7KΩ
RE72	1	1	GM21414720	14.7KΩ
RE73	1	1	GM21410030	100KΩ
RE74	1	1	GM21410030	100KΩ
RE75	1	1	GM21410030	100KΩ
RE76	1	1	GM21410030	100KΩ
RE77	1	1	GM21446410	4.64KΩ
RE78	1	1	GM21446410	4.64KΩ
RE79	1	1	GM21446410	4.64KΩ
RE80	1	1	GM21446410	4.64KΩ
RE81	1	1	GM21421510	2.15KΩ
RE82	1	1	GM21421510	2.15KΩ
RE83	1	1	GM21446410	4.64KΩ
RE84	1	1	GM21446410	4.64KΩ
				PD00-SEMICONDUCTORS
Q881	1	1	HC10026090	IC NJM2041DD
QD01	1	1	HT333291B0	Transistor 2SC3329(BL)
QD02	1	1	HT333291B0	Transistor 2SC3329(BL)
QD03	1	1	HT113161B0	Transistor 2SA1316(BL)
QD04	1	1	HT113161B0	Transistor 2SA1316(BL)
QD05	1	1	HT333291B0	Transistor 2SC3329(BL)
QD06	1	1	HT333291B0	Transistor 2SC3329(BL)
QD07	1	1	HT113161B0	Transistor 2SA1316(BL)
QD08	1	1	HT113161B0	Transistor 2SA1316(BL)
QD09	1	1	HT333291B0	Transistor 2SC3329(BL)
QD10	1	1	HT333291B0	Transistor 2SC3329(BL)
QD11	1	1	HT113161B0	Transistor 2SA1316(BL)
QD12	1	1	HT113161B0	Transistor 2SA1316(BL)
QD13	1	1	HT333291B0	Transistor 2SC3329(BL)
QD14	1	1	HT333291B0	Transistor 2SC3329(BL)
QD15	1	1	HT113161B0	Transistor 2SA1316(BL)
QD16	1	1	HT113161B0	Transistor 2SA1316(BL)
QD17	1	1	HT333291B0	Transistor 2SC3329(BL)
QD18	1	1	HT333291B0	Transistor 2SC3329(BL)
QD19	1	1	HT113161B0	Transistor 2SA1316(BL)
QD20	1	1	HT113161B0	Transistor 2SA1316(BL)
QD21	1	1	HT333291B0	Transistor 2SC3329(BL)
QD22	1	1	HT333291B0	Transistor 2SC3329(BL)
QD23	1	1	HT113161B0	Transistor 2SA1316(BL)
QD24	1	1	HT113161B0	Transistor 2SA1316(BL)
QD25	1	1	HT333291B0	Transistor 2SC3329(BL)
QD26	1	1	HT333291B0	Transistor 2SC3329(BL)
QD27	1	1	HT113161B0	Transistor 2SA1316(BL)
QD28	1	1	HT113161B0	Transistor 2SA1316(BL)
QD29	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD30	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD31	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD32	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD33	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD34	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD35	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD36	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD37	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD38	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD39	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD40	1	1	HT333292A0	Transistor 2SC3329(GR or BL)

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
QD41	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD42	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD43	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD44	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD45	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD46	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD47	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD48	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD49	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD50	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD51	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD52	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD53	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD54	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QD55	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QD56	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE01	1	1	HF203691B0	F.E.T. 2SK369(BL)
QE02	1	1	HF203691B0	F.E.T. 2SK369(BL)
QE03	1	1	HF101111B0	F.E.T. 2SJ111(BL)
QE04	1	1	HF101111B0	F.E.T. 2SJ111(BL)
QE05	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QE06	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QE07	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE08	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE09	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE10	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE11	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QE12	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QE13	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE14	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE15	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QE16	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QE17	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE18	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE19	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QE20	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QE21	1	1	HT332982D0	Transistor 2SC3298(GR or BL)
QE22	1	1	HT332982D0	Transistor 2SC3298(GR or BL)
QE23	1	1	HT113062D0	Transistor 2SA1306(GR or BL)
QE24	1	1	HT113062D0	Transistor 2SA1306(GR or BL)
QE25	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QE26	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QE27	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE28	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QE29	1	1	HC10026090	IC NJM2041DD
QE30	1	1	HC10026090	IC NJM2041DD
DD01	1	1	HD20014010	Diode 1SS81
DD02	1	1	HD20014010	Diode 1SS81
DD03	1	1	HD20014010	Diode 1SS81
DD04	1	1	HD20014010	Diode 1SS81
DW01	1	1	HD20014010	Diode 1SS81
DW02	1	1	HD20014010	Diode 1SS81
DW03	1	1	HD20014010	Diode 1SS81
DW04	1	1	HD20014010	Diode 1SS81

REF DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
				PD00-MISCELLANEOUS
JD01	1	1	YP01001060	Plug, 6P
JD02	1	1	YP01001060	Plug, 6P
JD03	1	1	YP01001040	Plug, 4P
JD04	1	1	YP01001030	Plug, 3P
JE04	1	1	YP01001030	Plug, 3P
JW01	1	1	YJ06002460	Jack, 7P
JW02	1	1	YJ06002460	Jack, 7P
JW03	1	1	YP06001050	Plug, 5P
JW04	1	1	YP01001040	Plug, 4P
JW05	1	1	YP01001030	Plug, 3P
LW01	1	1	LY20240230	Relay, SZ-2104
LW02	1	1	LY20240230	Relay, SZ-2104
LW03	1	1	LY20240230	Relay, SZ-2104
LW04	1	1	LY20240230	Relay, SZ-2104
SD01	1	1	SS04040090	Slide Switch
SD02	1	1	SB11730010	Switch Band, FLX
SD03	1	1	SR00040190	Rotary Switch
SW01	1	1	SS04040080	Slide Switch
SW02	1	1	SB11730010	Switch Band, FLX
SW03	1	1	SR00040020	Rotary Switch
WD01	1	1	YB00190070	Jumper Lead
WD02	1	1	YB00190070	Jumper Lead
WE01	1	1	YB00180200	Connective Cord
WE02	1	1	YB00250250	Connective Cord
WE03	1	1	YB00210050	Connective Cord
WE04	1	1	YB00240060	Connective Cord
WW01	1	1	YU03070240	Jumper Lead, 3P
WW02	1	1	YU05080240	Jumper Lead, 5P
WW03	1	1	YB00580020	Connective Cord
WW04	1	1	YB00280210	Connective Cord
WW05	1	1	YB00570010	Connective Cord
				PJ01-BUFFER AMP CIRCUIT BOARD
PJ01	1	1	YK238H0210	P.W. Board, Buffer Amp
	1		ZZ238H0210	P.W. Board Assembly
				PJ01-CAPACITORS
CF01	1	1	EQ10505030	Elect 1μF 50V
CF02	1	1	EQ10505030	Elect 1μF 50V
CF03	1	1	EQ47505030	Elect 4.7μF 50V
CF04	1	1	EQ47505030	Elect 4.7μF 50V
CF07	1	1	EQ10601630	Elect 10μF 16V
CF08	1	1	EQ10601630	Elect 10μF 16V
CF09	1	1	EQ22505030	Elect 2.2μF 50V
CF10	1	1	EQ22505030	Elect 2.2μF 50V
CF13	1	1	DF15684350	Film 0.68μF ±5%
CF14	1	1	DF15684350	Film 0.68μF ±5%
CF15	1	1	DF15824350	Film 0.82μF ±5%

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
CF16	1	1	DF15824350	Film 0.82μF ±5%
CF17	1	1	DF15684350	Film 0.68μF ±5%
CF18	1	1	DF15684350	Film 0.68μF ±5%
CF19	1	1	DF15394350	Film 0.39μF ±5%
CF20	1	1	DF15394350	Film 0.39μF ±5%
CF21	1	1	DF15563350	Film 0.056μF ±5%
CF22	1	1	DF15563350	Film 0.056μF ±5%
CF23	1	1	DF15124350	Film 0.12μF ±5%
CF24	1	1	DF15124350	Film 0.12μF ±5%
CF25	1	1	DF15184350	Film 0.18μF ±5%
CF26	1	1	DF15184350	Film 0.18μF ±5%
CF27	1	1	DF15123350	Film 0.012μF ±5%
CF28	1	1	DF15123350	Film 0.012μF ±5%
CF29	1	1	DF15682350	Film 6800pF ±5%
CF30	1	1	DF15682350	Film 6800pF ±5%
CF31	1	1	OA47601610	Elect 47μF 16V
CF32	1	1	OA47601610	Elect 47μF 16V
CF33	1	1	OA47601610	Elect 47μF 16V
CF34	1	1	OA47601610	Elect 47μF 16V
CJ01	1	1	DF55121520	Film 120pF ±5%
CJ02	1	1	DF55121520	Film 120pF ±5%
CJ03	1	1	OA22603510	Elect 22μF 35V
CJ04	1	1	OA22603510	Elect 22μF 35V
CJ05	1	1	OA22603510	Elect 22μF 35V
CJ06	1	1	OA22603510	Elect 22μF 35V
CJ07	1	1	OF15222010	Film 2200pF ±5%
CJ08	1	1	OF15222010	Film 2200pF ±5%
CJ09	1	1	OA22703510	Elect 220μF 35V
CJ10	1	1	OA22703510	Elect 220μF 35V
CJ11	1	1	OA22703510	Elect 220μF 35V
CJ12	1	1	OA22703510	Elect 220μF 35V
CJ13	1	1	DF16105550	Film 1μF ±10%
CJ14	1	1	DF16105550	Film 1μF ±10%
CK01	1	1	OF15682010	Film 6800pF ±5%
CK02	1	1	OF15682010	Film 6800pF ±5%
CK03	1	1	EQ22505030	Elect 2.2μF 50V
CK04	1	1	EQ22505030	Elect 2.2μF 50V
CK05	1	1	DF35181520	Mica 180pF ±5%
CK06	1	1	DF35181520	Mica 180pF ±5%
CK07	1	1	EQ47601630	Elect 47μF 16V
CK08	1	1	EQ47601630	Elect 47μF 16V
CK09	1	1	OA10701610	Elect 100μF 16V
CK10	1	1	OA10701610	Elect 100μF 16V
				PJ01-RESISTORS (All Resistors are ±2% and ¼W)
RF01	1	1	GM21421500	215Ω
RF02	1	1	GM21421500	215Ω
RF03	1	1	GM214825G0	82.5Ω
RF04	1	1	GM214825G0	82.5Ω
RF05	1	1	GM21482500	825Ω
RF06	1	1	GM21482500	825Ω
RF07	1	1	GM21419610	1.96KΩ
RF08	1	1	GM21419610	1.96KΩ
RF09	1	1	GM21433210	3.32KΩ
RF10	1	1	GM21433210	3.32KΩ
RF11	1	1	GM21417810	1.78KΩ
RF12	1	1	GM21417810	1.78KΩ
RF13	1	1	GM21419600	196Ω
RF14	1	1	GM21419600	196Ω
RF15	1	1	GM21421530	215KΩ

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
RF16	1	1	GM21421530	215KΩ
RF17	1	1	GM21436500	365Ω
RF18	1	1	GM21436500	365Ω
RF19	1	1	GM21421530	215KΩ
RF20	1	1	GM21421530	215KΩ
RF21	1	1	GM21416200	162Ω
RF22	1	1	GM21416200	162Ω
RF23	1	1	GM214100G0	100Ω
RF24	1	1	GM214100G0	100Ω
RF25	1	1	GM21421530	215KΩ
RF26	1	1	GM21421530	215KΩ
RF27	1	1	GM21417810	1.78KΩ
RF28	1	1	GM21417810	1.78KΩ
RF29	1	1	GM21446410	4.64KΩ
RF30	1	1	GM21446410	4.64KΩ
RJ01	1	1	GM21421500	215Ω
RJ02	1	1	GM21421500	215Ω
RJ03	1	1	GM21446420	46.4KΩ
RJ04	1	1	GM21446420	46.4KΩ
RJ05	1	1	GM21433210	3.32KΩ
RJ06	1	1	GM21433210	3.32KΩ
RJ07	1	1	GM21433210	3.32KΩ
RJ08	1	1	GM21433210	3.32KΩ
RJ09	1	1	GM21446400	464Ω
RJ10	1	1	GM21446400	464Ω
RJ11	1	1	GM21446400	464Ω
RJ12	1	1	GM21446400	464Ω
RJ13	1	1	GM21438300	383Ω
RJ14	1	1	GM21438300	383Ω
RJ15	1	1	GM21438300	383Ω
RJ16	1	1	GM21438300	383Ω
RJ17	1	1	GM21482500	825Ω
RJ18	1	1	GM21482500	825Ω
RJ19	1	1	GM21482500	825Ω
RJ20	1	1	GM21482500	825Ω
RJ21	1	1	GM21468120	68.1KΩ
RJ22	1	1	GM21468120	68.1KΩ
RJ23	1	1	GG05220140	22Ω ±5%
RJ24	1	1	GG05220140	22Ω ±5%
RJ25	1	1	GG05220140	22Ω ±5%
RJ26	1	1	GG05220140	22Ω ±5%
RJ27	1	1	GG05470140	47Ω ±5%
RJ28	1	1	GG05470140	47Ω ±5%
RJ29	1	1	GG05470140	47Ω ±5%
RJ30	1	1	GG05470140	47Ω ±5%
RJ31	1	1	GM21418720	18.7KΩ
RJ32	1	1	GM21418720	18.7KΩ
RJ33	1	1	GM21418720	18.7KΩ
RJ34	1	1	GM21418720	18.7KΩ
RJ35	1	1	GM21421500	215Ω
RJ36	1	1	GM21421500	215Ω
RJ37	1	1	GM21446420	46.4KΩ
RJ38	1	1	GM21446420	46.4KΩ
RJ39	1	1	GM21446420	46.4KΩ
RJ40	1	1	GM21446420	46.4KΩ
RJ41	1	1	RM01030760	10KΩ, Variable
RK01	1	1	GM21433200	332Ω
RK02	1	1	GM21433200	332Ω
RK03	1	1	GM21421520	21.5KΩ
RK04	1	1	GM21421520	21.5KΩ
RK05	1	1	GM21421520	21.5KΩ

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
RK06	1	1	GM21421520	21.5KΩ
RK07	1	1	GM21410010	1KΩ
RK08	1	1	GM21410010	1KΩ
RK09	1	1	GM21410020	10KΩ
RK10	1	1	GM21410020	10KΩ
RK11	1	1	NK05181010	180Ω ±5% 1W
RK12	1	1	NK05181010	180Ω ±5% 1W
RK13	1	1	NK05471010	470Ω ±5% 1W
RK14	1	1	NK05471010	470Ω ±5% 1W
RK15	1	1	GG05470140	47Ω ±5%
RK16	1	1	GG05470140	47Ω ±5%
				PJ01-SEMICONDUCTORS
QJ01	1	1	HF203691B0	F.E.T. 2SK369(BL)
QJ02	1	1	HF203691B0	F.E.T. 2SK369(BL)
QJ03	1	1	HF101111B0	F.E.T. 2SJ111(BL)
QJ04	1	1	HF101111B0	F.E.T. 2SJ111(BL)
QJ05	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QJ06	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QJ07	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QJ08	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QJ09	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QJ10	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QJ11	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QJ12	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QJ13	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QJ14	1	1	HT333292A0	Transistor 2SC3329(GR or BL)
QJ15	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QJ16	1	1	HT113162A0	Transistor 2SA1316(GR or BL)
QK01	1	1	HC10016090	IC 4556D
DJ01	1	1	HD60002100	C.R. Diode 10YB1.3B
DJ02	1	1	HD60002100	C.R. Diode 10YB1.3B
DJ03	1	1	HD60002100	C.R. Diode 10YB1.3B
DJ04	1	1	HD60002100	C.R. Diode 10YB1.3B
DJ05	1	1	HD20014010	Diode 1SS81
DJ06	1	1	HD20014010	Diode 1SS81
DJ07	1	1	HD20014010	Diode 1SS81
DJ08	1	1	HD20014010	Diode 1SS81
DJ09	1	1	HD20014010	Diode 1SS81
				PJ01-MISCELLAENOUS
JF01	1	1	YP01001030	Plug, 3P
JF02	1	1	YP01001030	Plug, 3P
JJ01	1	1	YP01001030	Plug, 3P
JJ02	1	1	YP01001030	Plug, 3P
JJ03	1	1	YP06001040	Plug, 3P
JJ04	1	1	YJ06002430	Jack, 3P
JJ05	1	1	YP01001030	Plug, 3P
JJ06	1	1	YP01001030	Plug, 3P
JJ07	1	1	YP01001030	Plug, 3P
JK01	1	1	YP01001030	Plug, 3P
JK02	1	1	YP01001030	Plug, 3P
JK03	1	1	YP06001040	Plug, 3P
LJ01	1	1	LY20240230	Relay, SZ-2104
LJ02	1	1	LY20240230	Relay, SZ-2104
SF01	1	1	SR04060080	Rotary Switch, Tone
SF02	1	1	SR04060080	Rotary Switch, Tone
SJ01	1	1	SP02020760	Push Switch, Mono/Subsonic
SJ02	1	1	SP02011160	Push Switch, Headphone Out
WK01	1	1	YU03060240	Jumper Lead, 3P

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
				PL00-AC OUTLET CIRCUIT BOARD
PL00		1	YN238H2220	P.W. Board, AC Outlet
⚠CL01		1	DF16104510	Film Cap. 0.1μF ±10%
⚠CL02		1	DF16104510	Film Cap. 0.1μF ±10%
⚠RL01		1	GM21410040	Resistor 1MΩ ±2% ¼W
⚠JL01		1	YJ04000730	Jack, 3P AC Outlet
⚠JL02		1	YJ04000730	Jack, 3P AC Outlet
				PS00-TAPE MONITOR SW. CIRCUIT BOARD
PS00	1	1	YK238H1530	P.W. Board, Tape Monitor SW.
	1		ZZ238H8530	P.W. Board Assembly
RS01	1	1	NK05102010	Resistor 1KΩ ±5% 1W
JS01	1	1	YP06001050	Plug, 5P
SS01	1	1	SP02030300	Push Switch
				PT00-DIRECT SWITCH CIRCUIT BOARD
PT00	1	1	YK238H1550	P.W. Board, Direct Switch
	1		ZZ238H8550	P.W. Board Assembly
RT01	1	1	NK05102010	Resistor 1KΩ ±5% 1W
RT02	1	1	NK05102010	Resistor 1KΩ ±5% 1W
ST01	1	1	SP02010870	Push Switch
WT01	1	1	YU03070240	Jumper Lead, 3P
				PU00-SELECTOR SWITCH CIRCUIT BOARD
PU00	1	1	YK238H1520	P.W. Board, Selector Switch
	1		ZZ238H8520	P.W. Board Assembly
RU01	1	1	RM01030250	Variable Resistor 10KΩ
JU01	1	1	YP01001070	Plug, 7P
JU02	1	1	YP01001070	Plug, 7P
JU03	1	1	YP01001060	Plug, 6P
JU04	1	1	YP01001030	Plug, 3P
SU01	1	1	SR04040310	Rotary Switch
WU01	1	1	YB00280220	Connective Cord

REF. DESIG.	Q'TY E	Q'TY F	PART NO.	DESCRIPTION
				PV00-RCA JACK CIRCUIT BOARD
PV00	1	1	YK238H2220	P.W. Board, RCA Jack
	1		ZZ238H8220	P.W. Board Assembly
				PV00-CAPACITORS
CV01 ~ CV16	16	16	DA17103010	Ceramic 0.01μF ±20%
				PV00-MISCELLANEOUS
JV01 ~ JV06	6	6	YT02040530	Terminal, 4P
JV07	1	1	YT02020300	Terminal, 2P
WV01	1	1	YU07070240	Jumper Lead, 7P
WV02	1	1	YU07070240	Jumper Lead, 7P
WV03	1	1	YB00570020	Connective Cord, 3P
WV04	1	1	YB00140100	Connective Cord, 4P
WV05	1	1	YB00580030	Connective Cord, 7P
WV06	1	1	YB00600300	Connective Cord, 7P
WV07	1	1	YB00130160	Connective Cord, 6P
WV08	1	1	YB00130150	Connective Cord, 6P
				PW50-HEADPHONE JACK CIRCUIT BOARD
PW50	1	1	YK238H1540	P.W. Board, Headphone Jack
	1		ZZ238H8540	P.W. Board Assembly
JW51	1	1	YJ01002260	Jack, Headphone
JW52	1	1	YJ06002430	Jack, 3P

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

NOTE ON SAFETY :
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

9. TECHNICAL SPECIFICATIONS

EQUALIZER AMPLIFIER

- **MC**

Input Sensitivity/Input Inpedance	125 μV/100 ohms
RIAA (20 – 100 kHz)	+0, –1.0 dB
Total Harmonic Distortion (20 – 20 kHz)	0.002%
Signal-to-Noise Ratio (IHF-A 125 μV Input)	80 dB
(IHF-A 500 μV Input)	92 dB
Maximum Input (1 kHz)	12.5 mV

- **MM**

Input Sensitivity/Input Inpedance	2.5 mV/47 kohms
RIAA (20 – 100 kHz)	+0, –0.25 dB
Total Harmonic Distortion (20 – 20 kHz)	0.006%
Signal-to-Noise Ratio (IHF-A 2.5 mV Input)	87 dB
(IHF-A 5 mV Input)	93 dB
Maximum Input (1 kHz)	250 mV

OUTPUT/TONE CONTROL

Input Sensitivity/Input Inpedance	
TUNER, CD, AUX, TAPE IN 1, 2	150 mV/47 kohms
TUNER, CD, AUX (DIRECT)	150 mV/10 kohms
Output Ratings/Output Inpedance	1.5 V/50 ohms
Frequency Response (10 – 100 kHz)	+0, –1.0 dB
Total Harmonic Distortion (20 – 20 kHz)	0.006%
Intermodulation Distortion	0.006%

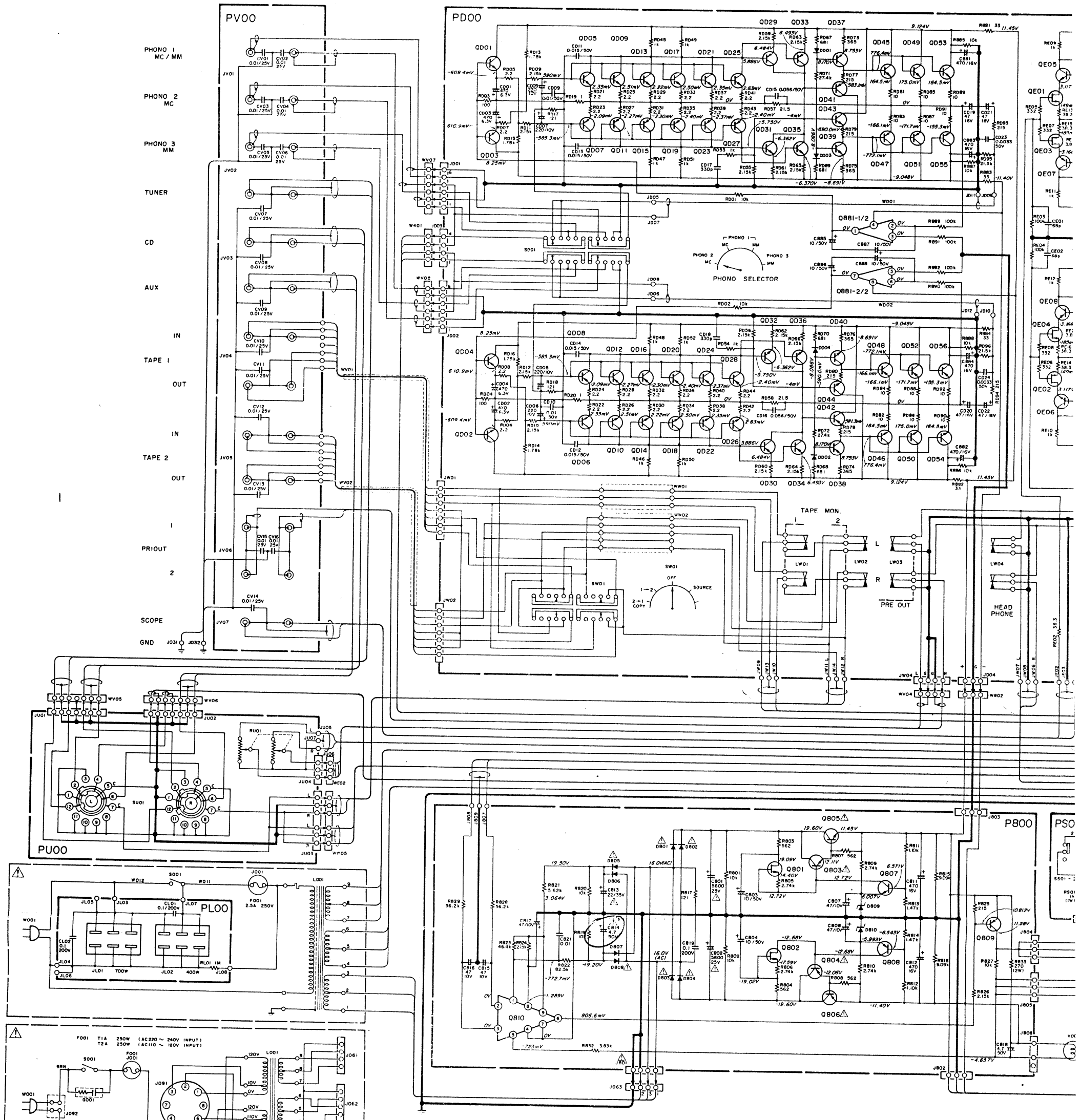
Tone Control

BASS (100 Hz)	DEFEAT, –4 dB, –2 dB +2 dB, +4 dB, +6 dB
TREBLE (10 kHz)	DEFEAT, –2 dB, –4 dB +2 dB, +4 dB, +6 dB
Signal-to-Noise Ratio (IHF-A 150 mV Input)	105 dB
(IHF-A 500 mV Input)	115 dB

Subsonic Filter	16 Hz 6 dB/oct
Power Requirements	AC 100 V 50 /60 Hz
Power Consumption	50 W
Dimensions	
Panel Width	454 mm
Panel Height	121 mm
Depth	386 mm
Weight	11.5 kg

Specifications and apperance are subject to change for modification without notice.

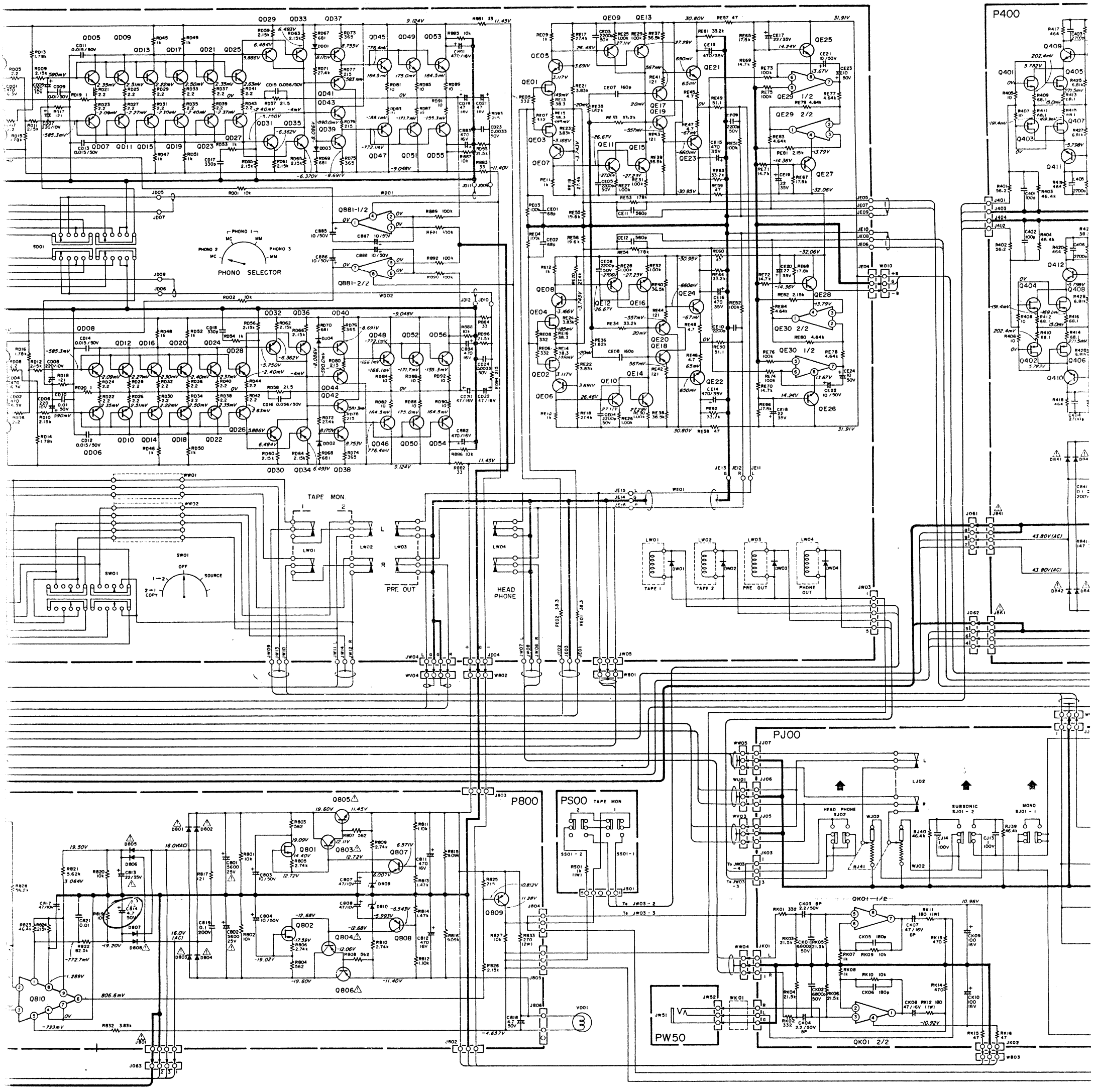
10. SCHEMATIC DIAGRAM



Schaltet auch
c8n → C814 (neben Netzteil)

NOTE ON SAFETY:

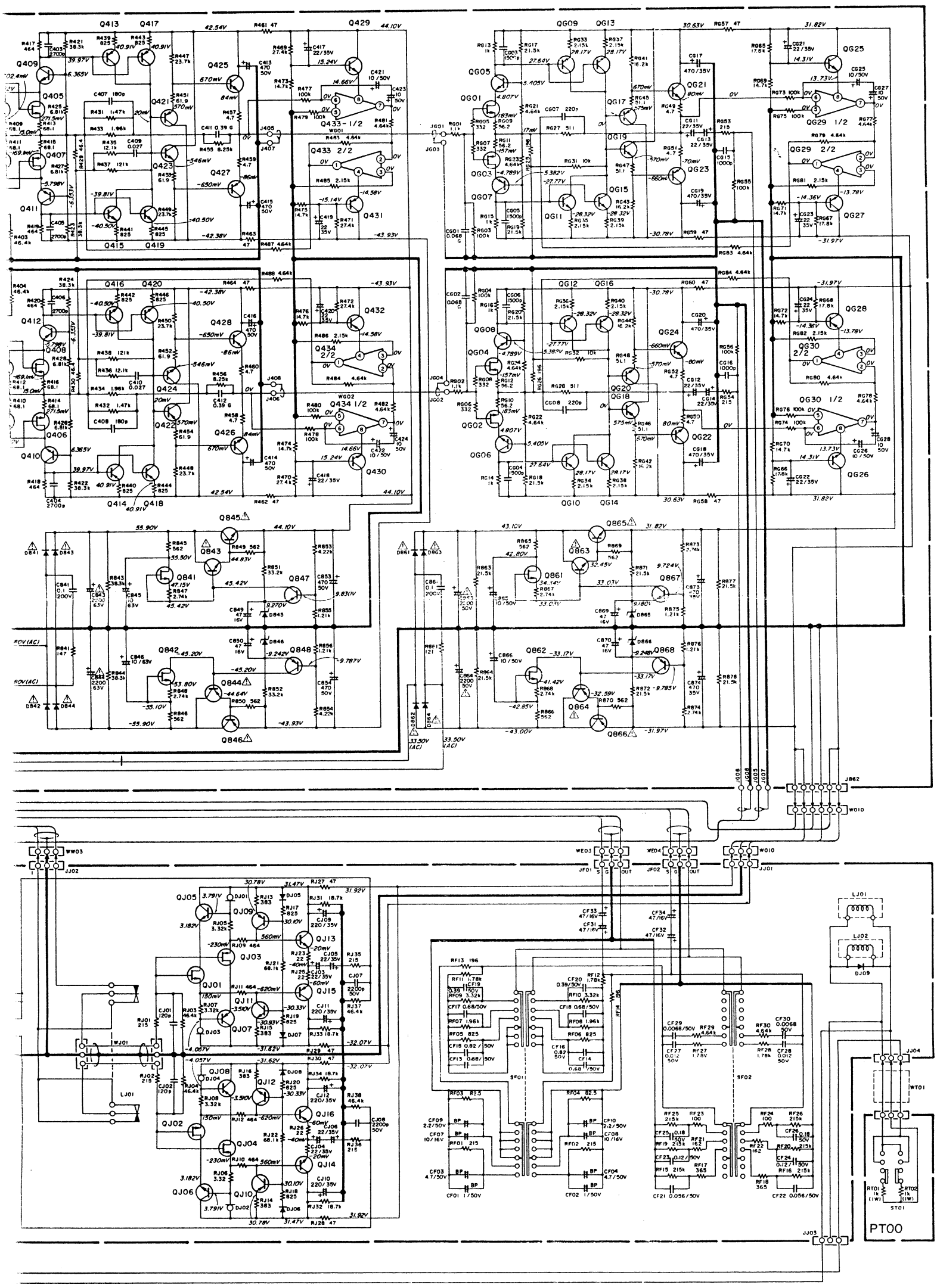
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.



Schaltet nicht
ein → C814 Cuebiw Netzbrücke

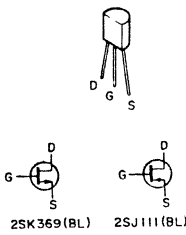
NOTE ON SAFETY:

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. *Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.*



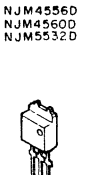
QD01,QD02,QD05,QD06,QD09,QD10,QD13
QD14,QD17,QD18,QD21,QD22,QD25,QD26
HT333291BI
2SC3329 (BL)

QD31,QD32,QD35,QD36,QD39
QD40,QD43,QD44,QD45
QD46,QD49,QD50,QD53,QD54
QE05,QE06,QE11,QE12,QE15
QE16,QE19,QE20,QE25,QE26
QJ05,QJ06,QJ11~QJ14
QG05,QG06,QG11,QG12,QG15
QG16,QG19,QG20,QG25,QG26
Q409,Q410,Q415,Q416,Q419,Q420
Q423,Q424,Q429,Q430
Q803,Q807,Q843,Q847,Q863,Q867
HT333292AI
2SC3329 (GR,BL)



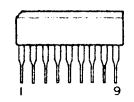
QD03,QD04,QD07,QD08,QD11,QD12,
QD15,QD16,QD19,QD20,QD23,QD24,QD27,QD28
HT1131618I
2SA1316 (BL)

QD29,QD30,QD33,QD34,QD37,QD38,QD41,QD42
QD47,QD48,QD51,QD52,QD55,QD56,QE07,QE08
QE09,QE10,QE13,QE14,QE17,QE18,QE27,QE28
QJ07~QJ10,QJ15,QJ16,Q804,Q808,QG07~QG10
QG13,QG14,QG17,QG18,QG27,QG28,Q411~Q414
Q417,Q418,Q421,Q422,Q431,Q432
Q844,Q848,Q864,Q868
HT1131628I
2SA1316 (GR BL)



QJ01,QJ02,QE01,QE02,Q401,Q402,Q405,Q406
QG01,QG02
HF2036918I
2SK369 (BL)

QJ03,QJ04,QE03,QE04,Q403,Q404,Q407,Q408
QG03,QG04
HF1011118I
2SJ111 (BL)

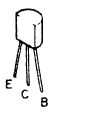


QK01
HC10016090
4556D

QE21,QE22,QG21,QG22,Q425,Q426
Q805,Q845,Q865
HT332982D0
2SC3298 (O,Y)

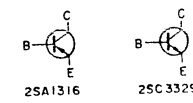
TA7317P

QE23,QE24,QG23,QG24,Q427,Q428
Q806,Q846,Q866
HT332982D0
2SA1306 (O,Y)



Q809
HT112252A0
2SA1225 (O,Y)

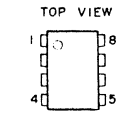
Q810
HC10042050
TA7317P



Q801,Q802,Q841,Q842,Q861,Q862
HF2024610
2SK246 (GR)

Q433,Q434,Q881,QG29,QG30
HC10017090
4560D

QE29,QE30
HC10023090
5532D



DJ01~DJ04
HD60002100
10YBI.3B

DD01~DD04,DJ05~DJ09
DW01~DW04
HD2001401I
1SS81

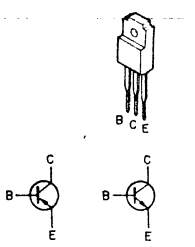
NJM4556D
NJM4560D
NJM5532D

D801~D808,D861~D864
HD20005010
W06B

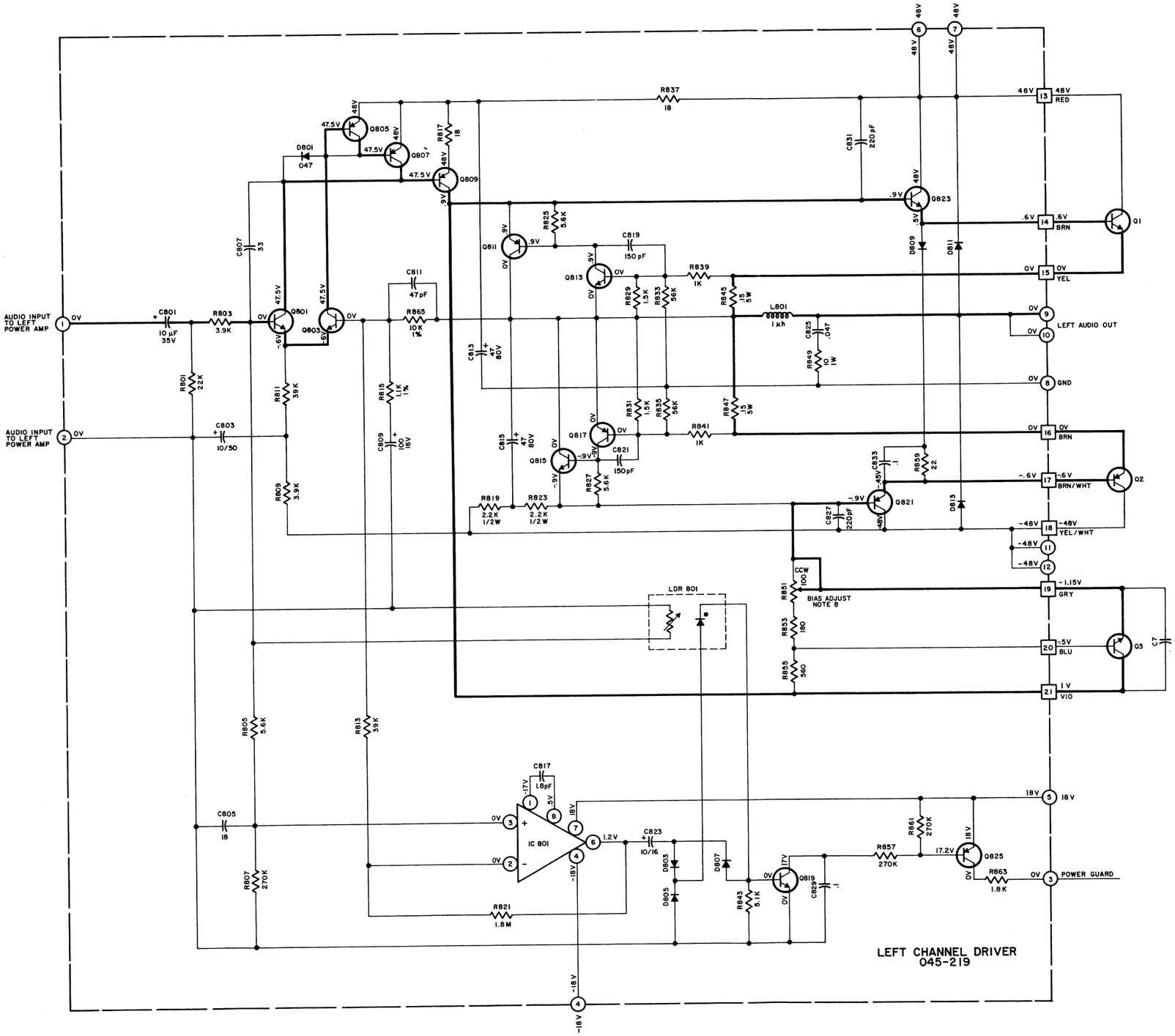
D809,D810
HD30023010
HZ6C1L

D841~D844
HD20011010
W06C

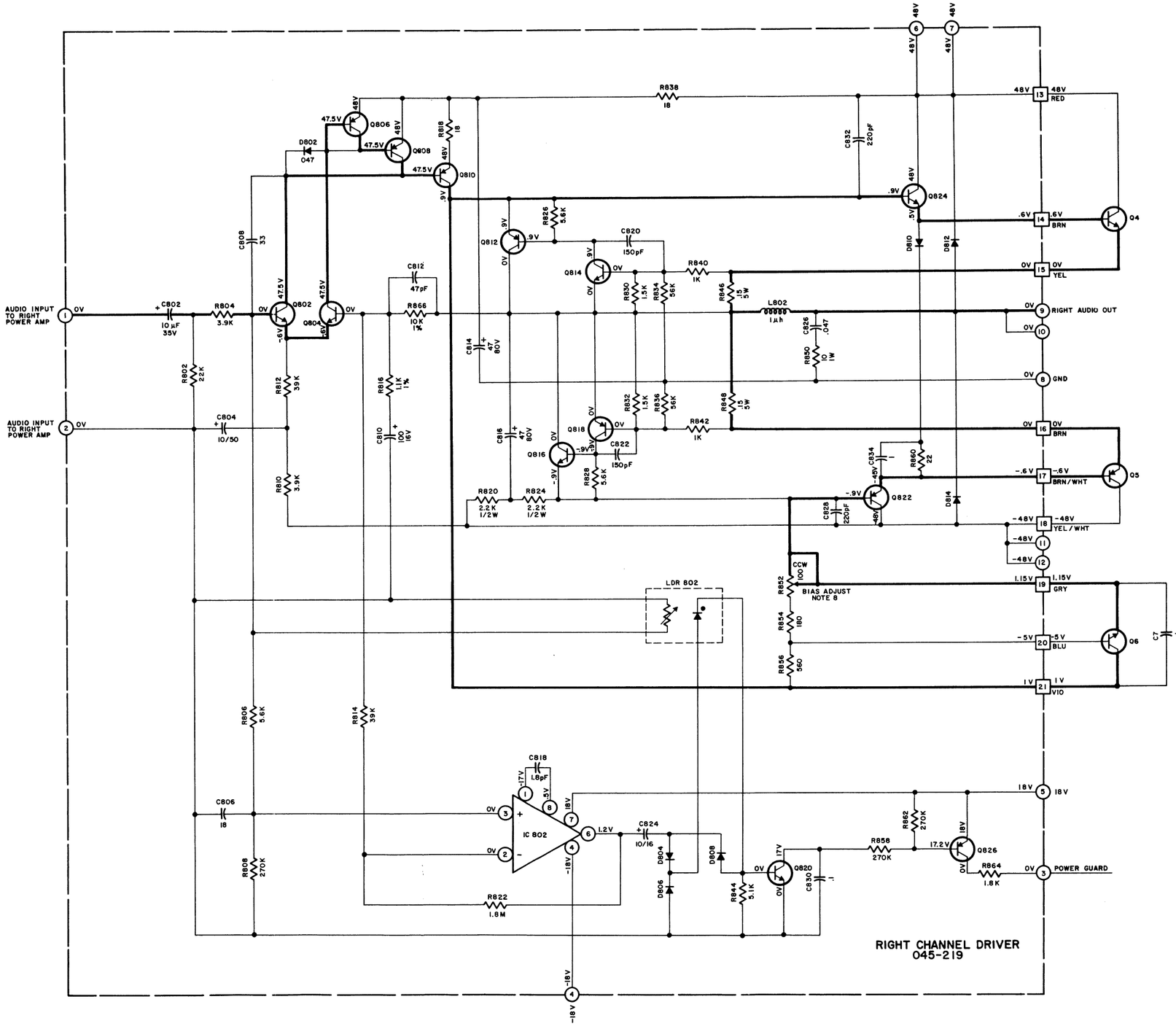
D865,D866,D845,D846
HD30045011
HZ9C1L



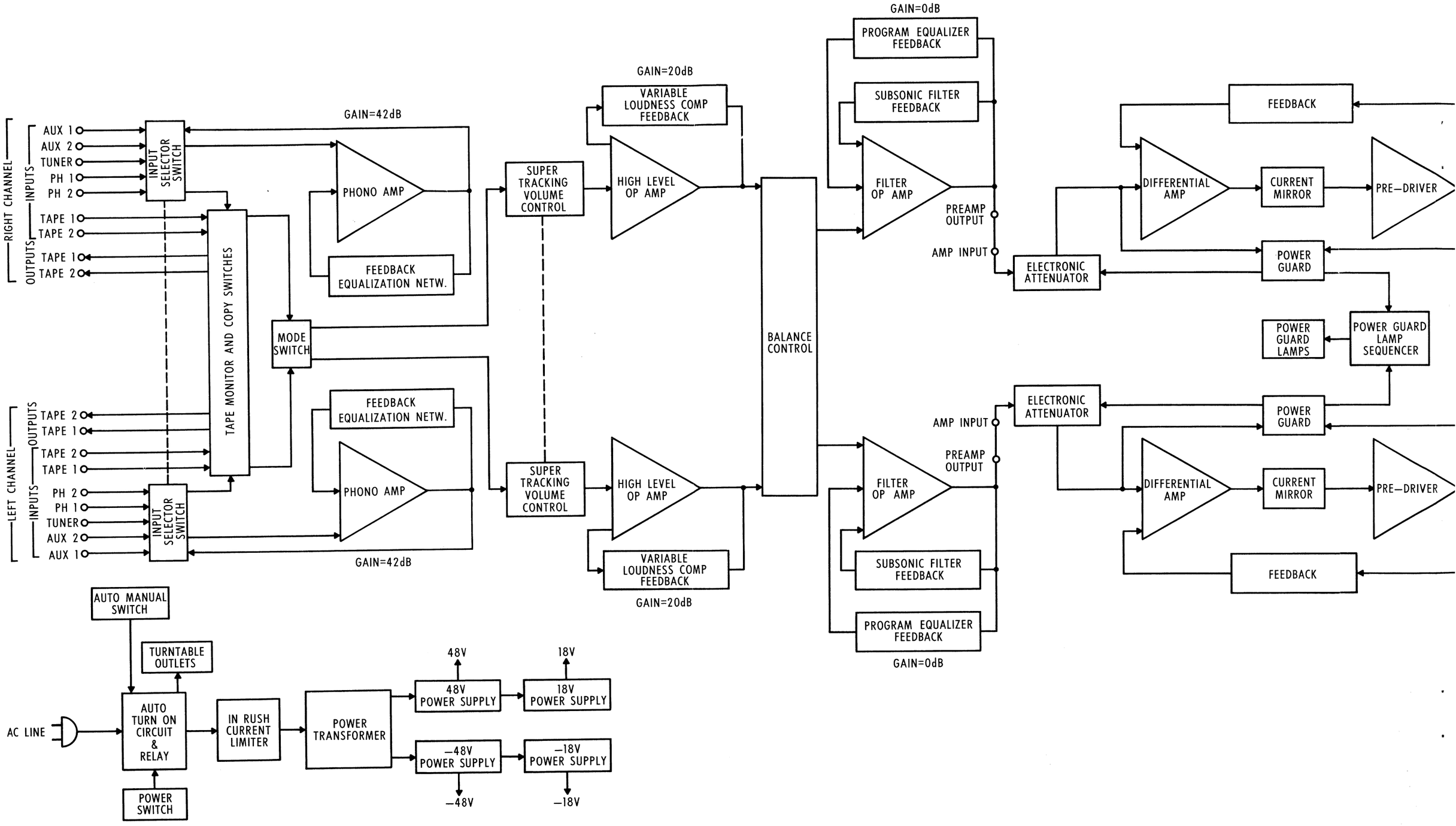
Components and wiring are subject to change for modification without notice.

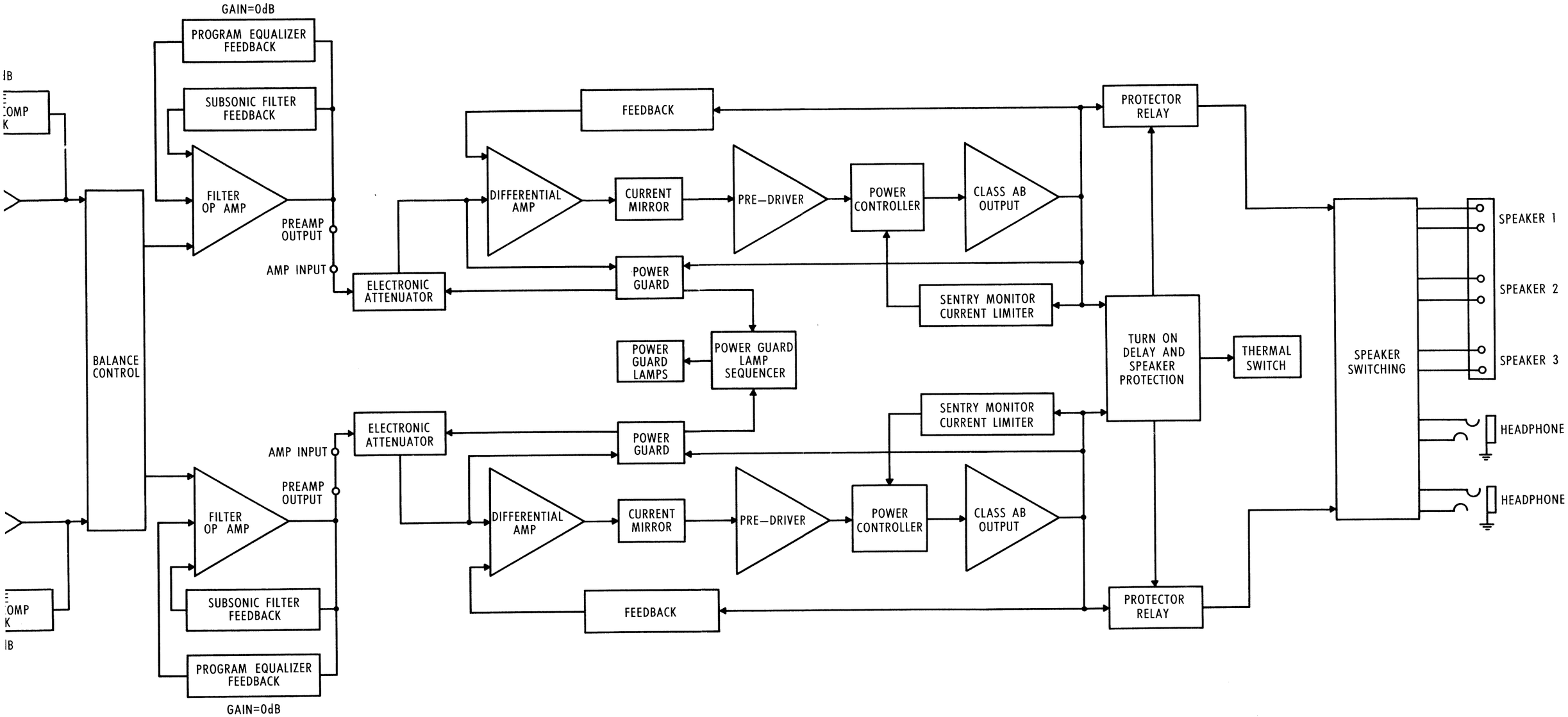


LEFT CHANNEL DRIVER



RIGHT CHANNEL DRIVER


RIGHT CHANNEL
INPUTS
AUX 1
AUX 2
TUNER
PH 1
PH 2
OUTPUTS
TAPE 1
TAPE 2
TAPE 1
TAPE 2
INPUT SELECTOR SWITCH
TAPE MONITOR AND COPY SWITCHES
GAIN=42dB
PHONO AMP
FEEDBACK EQUALIZATION NETW.
MODE SWITCH
SUPER TRACKING VOLUME CONTROL
GAIN=20dB
VARIABLE LOUDNESS COMP FEEDBACK
HIGH LEVEL OP AMP
BALANCE CONTROL
GAIN=0dB
PROGRAM EQUALIZER FEEDBACK
SUBSONIC FILTER FEEDBACK
FILTER OP AMP
PREAMP OUTPUT
AMP INPUT
ELECTRONIC ATTENUATOR
FEEDBACK
DIFFERENTIAL AMP
CURRENT MIRROR
PRE—DRIVER
POWER GUARD
POWER GUARD LAMPS
POWER GUARD LAMP SEQUENCER
LEFT CHANNEL
OUTPUTS
TAPE 2
TAPE 1
TAPE 2
TAPE 1
INPUTS
PH 2
PH 1
TUNER
AUX 2
AUX 1
INPUT SELECTOR SWITCH
PHONO AMP
FEEDBACK EQUALIZATION NETW.
GAIN=42dB
SUPER TRACKING VOLUME CONTROL
HIGH LEVEL OP AMP
VARIABLE LOUDNESS COMP FEEDBACK
GAIN=20dB
FILTER OP AMP
PREAMP OUTPUT
AMP INPUT
SUBSONIC FILTER FEEDBACK
PROGRAM EQUALIZER FEEDBACK
GAIN=0dB
ELECTRONIC ATTENUATOR
POWER GUARD
DIFFERENTIAL AMP
CURRENT MIRROR
PRE—DRIVER
FEEDBACK
AUTO MANUAL SWITCH
TURNTABLE OUTLETS
AC LINE
AUTO TURN ON CIRCUIT & RELAY
POWER SWITCH
IN RUSH CURRENT LIMITER
POWER TRANSFORMER
48V
48V POWER SUPPLY
18V
18V POWER SUPPLY
—48V POWER SUPPLY
—48V
—18V POWER SUPPLY
—18V



BLOCK DIAGRAM

LEFT CHANNEL

LEFT INPUT
045-373
300 SERIES SYMBOL NO'S

TUNER IN
AUX 2 IN
AUX 1 IN
TUNER OUT
AUX 2 OUT
AUX 1 OUT
GND

PH 2
PH 1
TUNER
AUX 2
AUX 1

SECTION 1 FRONT
SECTION 1 REAR
SHIELD
WHT

PUSHBUTTON SWITCH
045-260
900 SERIES SYMBOL NO'S

TAPE 1 IN
TAPE 2 IN
TAPE 1 OUT
TAPE 2 OUT
LEFT TAPE 1 IN
LEFT TAPE 1 OUT
LEFT TAPE 2 OUT
LEFT TAPE 2 IN
RIGHT TAPE 2 IN
LEFT GND
RIGHT TAPE 2 OUT
RIGHT TAPE 1 OUT
RIGHT TAPE 1 IN

VIO/GRY
BLU/GRY
WHT/GRY
YEL
ORN
ORN/WHT
BLK
YEL/WHT
GRN/GRY
GRY
ORN/GRY
BRN/GRY

LEFT GND
RIGHT GND
RIGHT INPUT

INDICATOR
045-371
400 SERIES SYMBOL NO'S

LEFT INPUT
LEFT GND
LEFT OUTPUT
RIGHT GND
RIGHT OUTPUT
LED SUPPLY
MONITOR 1 LED
MONITOR 2 LED
COPY 1→2 LED
COPY 2→1 LED
SPEAKER 1 LED
SPEAKER 2 LED
SPEAKER 3 LED

VIO
YEL/GRY
RED/GRY
VIO/WHT

R1 10K
R2 10K
R3 VOLUME 100K

S1 INPUT SELECTOR (IN PHONO 2)
S2 MONITOR SELECTOR (IN STEREO)

FRONT
REAR

TONE/LOUDNESS/BALANCE
045-375
600 SERIES SYMBOL NO'S

LEFT MAIN INPUT
LEFT GND
RIGHT GND
RIGHT MAIN INPUT

DRIVER LEFT
045-219
800 SERIES SYMBOL NO'S

LEFT PREAMP OUT
AUDIO INPUT TO LEFT POWER AMP
LEFT AUDIO OUTPUT
LEFT POWER GUARD OUTPUT

PREAMP OUT
POWER AMP IN
JUMPER

DRIVER RIGHT
045-219
800 SERIES SYMBOL NO'S

RIGHT PREAMP OUT
AUDIO INPUT TO RIGHT POWER AMP
RIGHT AUDIO OUTPUT
RIGHT POWER GUARD OUTPUT

RED/WHT 18V
GRN/WHT -18V

POWER SUPPLY
045-369
200 SERIES SYMBOL NO'S

LED SUPPLY
SIGNAL GND
GND
RIGHT POWER GUARD INPUT
RIGHT SELECTOR INPUT

12V
LEFT LIMIT
LEFT NORMAL
RIGHT LIMIT
RIGHT NORMAL
5.3 VAC
GND

POWER GUARD LAMP
045-372
500 SERIES SYMBOL NO'S

#8610
#86.0

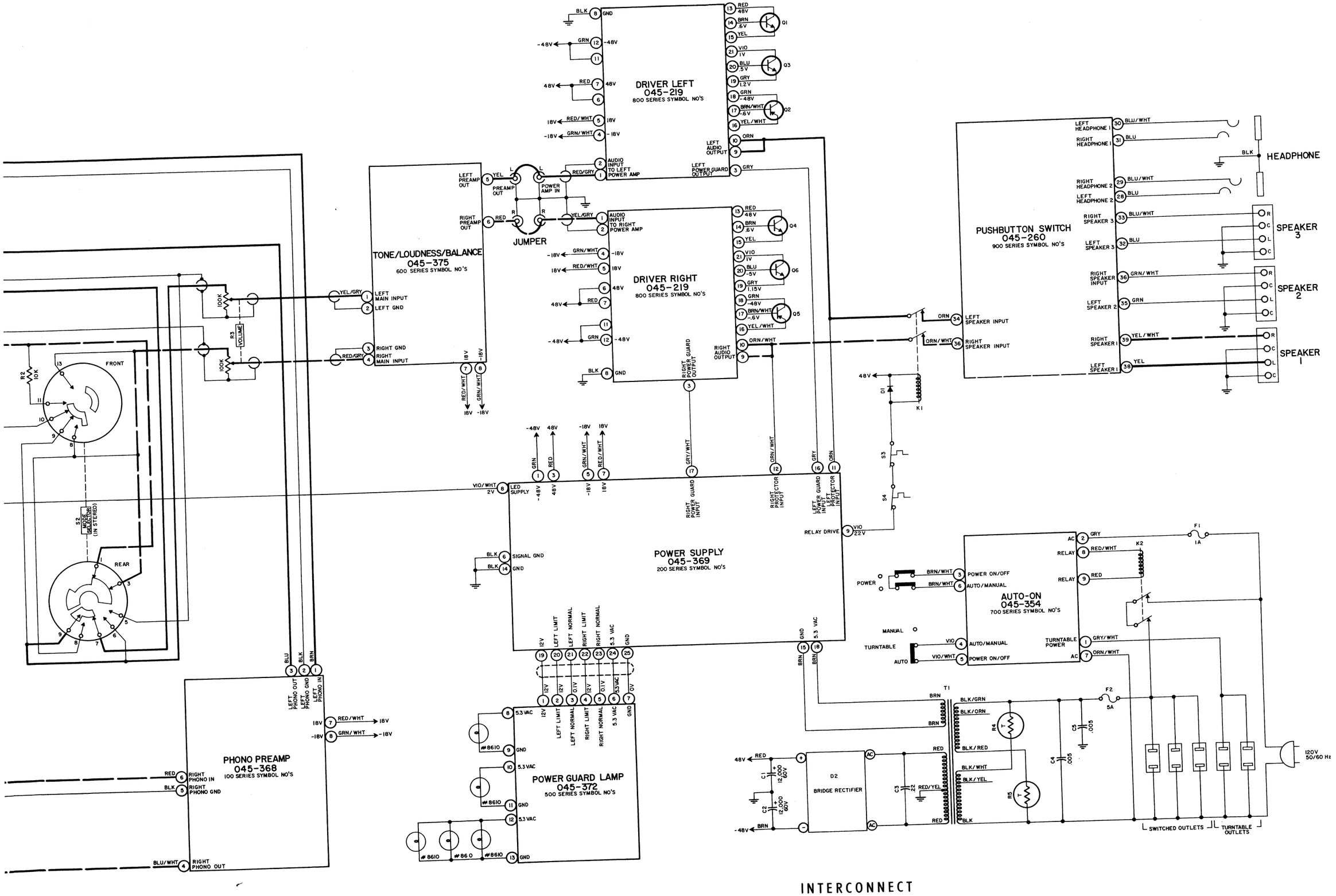
C1 12,000 60V
C2 12,000 60V

RIGHT CHANNEL

RIGHT INPUT
045-373
300 SERIES SYMBOL NO'S

PHONO PREAMP
045-368
100 SERIES SYMBOL NO'S

LEFT PHONO OUT
LEFT PHONO GND
LEFT PHONO IN
RIGHT PHONO IN
RIGHT PHONO GND
RIGHT PHONO OUT


DRIVER LEFT
045-219
800 SERIES SYMBOL NO'S
DRIVER RIGHT
045-219
800 SERIES SYMBOL NO'S
TONE/LOUDNESS/BALANCE
045-375
600 SERIES SYMBOL NO'S
PUSHBUTTON SWITCH
045-260
900 SERIES SYMBOL NO'S
POWER SUPPLY
045-369
200 SERIES SYMBOL NO'S
PHONO PREAMP
045-368
100 SERIES SYMBOL NO'S
POWER GUARD LAMP
045-372
500 SERIES SYMBOL NO'S
AUTO-ON
045-354
700 SERIES SYMBOL NO'S
JUMPER
HEADPHONE
SPEAKER 3
SPEAKER 2
SPEAKER 1
SWITCHED OUTLETS
TURNTABLE OUTLETS
120V 50/60 Hz
INTERCONNECT